09/582246



20 DEC 2002

SEQUENCE LISTING

<110> Bayer Aktiengesellschaft Hagen, Gustav Wick, Maresa Zubov, Dmitry

DEC 2 0 2002

<120> Regulatory DNA Sequences of the Gene for the Human Catalytic Telomerase Subunit, and Their Diagnostic and Therapeutic Use

<130> LeA 32 805 <140> 09/582,246 <141> 2000-06-22 <150> PCT/EP98/08216 <151> 1998-12-22 <150> DE19757984.1 <151> 1997-12-24 <160> 44 <170> PatentIn version 3.1 <210> 1 <211> 5126 <212> DNA <213> Homo sapiens

<400>

gagetetgaa eegtggaaae gaacatgaee ettgeetgee tgetteeetg ggtgggteaa 60 gggtaatgaa gtggtgtgca ggaaatggcc atqtaaatta cacgactctg ctgatgggga 120 ccgttccttc catcattatt catcttcacc cccaaggact gaatgattcc agcaacttct 180 tcgggtgtga caagccatga caaaactcag tacaaacacc actcttttac taggcccaca 240 gagcacgggc cacacccctg atatattaag agtccaggag agatgaggct gctttcagcc 300 accaggetgg ggtgacaaca geggetgaac agtetgttee tetagactag tagaccetgg 360 caggcactcc cccaaattct agggcctggt tgctgcttcc cgagggcgcc atctgccctg 420 gagactcage ctggggtgcc acactgagge cagecetgte tecacaceet eegectecag 480 gcctcagctt ctccagcagc ttcctaaacc ctgggtgggc cgtgttccag cgctactgtc 540 tcacctgtcc cactgtgtct tgtctcagcg acgtagctcg cacggttcct cctcacatgg 600 ggtgtctgtc tccttcccca acactcacat gcgttgaagg gaggagattc tgcgcctccc 660 agactggctc ctctgagcct gaacctggct cgtggccccc gatgcaggtt cctggcgtcc 720 ggctgcacgc tgacctccat ttccaggcgc tccccgtctc ctgtcatctg ccggggcctg 780 ccggtgtgtt cttctgtttc tgtgctcctt tccacgtcca gctgcgtgtg tctctgcccq 840 ctagggtctc ggggttttta taggcatagg acgggggcgt ggtgggccag ggcgctcttg 900 ggaaatgcaa catttgggtg tgaaagtagg agtgcctgtc ctcacctagg tccacgggca 960 caggcctggg gatggagccc ccgccaggga cccgcccttc tctgcccagc actttcctgc 1020

Page 1

1080 ccccctcct ctggaacaca gagtggcagt ttccacaagc actaagcatc ctcttcccaa 1140 aagacccagc attggcaccc ctggacattt gccccacagc cctgggaatt cacgtgacta 1200 cgcacatcat gtacacactc ccgtccacga ccgacccccg ctgttttatt ttaatagcta 1260 caaagcaggg aaatccctgc taaaatgtcc tttaacaaac tggttaaaca aacgggtcca 1320 tccgcacggt ggacagttcc tcacagtgaa gaggaacatg ccgtttataa agcctgcagg 1380 catctcaagg gaattacgct gagtcaaaac tgccacctcc atgggatacg tacgcaacat 1440 gctcaaaaag aaagaatttc accccatggc aggggagtgg ttaggggggt taaggacggt gggggcggca gctgggggct actgcacgca ccttttacta aagccagttt cctggttctg 1500 1560 atggtattgg ctcagttatg ggagactaac cataggggag tggggatggg ggaacccgga 1620 ggctgtgcca tctttgccat gcccgagtgt cctgggcagg ataatgctct agagatgccc 1680 acgtcctgat tcccccaaac ctgtggacag aacccgcccg gccccagggc ctttgcaggt 1740 gtgatctccg tgaggaccct gaggtctggg atccttcggg actacctgca ggcccgaaaa 1800 gtaatccagg ggttctggga agaggcgggc aggagggtca gaggggggca gcctcaggac 1860 gatggaggca gtcagtctga ggctgaaaag ggagggaggg cctcgagccc aggcctgcaa 1920 gcgcctccag aagctggaaa aagcggggaa gggaccctcc acggagcctg cagcaggaag 1980 gcacggctgg cccttagccc accagggccc atcgtggacc tccggcctcc gtgccatagg 2040 agggcactcg cgctgccctt ctagcatgaa gtgtgtgggg atttgcagaa gcaacaggaa 2100 acccatgcac tgtgaatcta ggattatttc aaaacaaagg tttacagaaa catccaagga 2160 cagggctgaa gtgcctccgg gcaagggcag ggcaggcacg agtgattta tttagctatt 2220 ttattttatt tacttacttt ctgagacaga gttatgctct tgttgcccag gctggagtgc 2280 agcggcatga tcttggctca ctgcaacctc cgtctcctgg gttcaagcaa ttctcgtgcc 2340 tcagcctccc aagtagctgg gatttcaggc gtgcaccacc acacccggct aattttgtat 2400 ttttagtaga gatgggcttt caccatgttg gtcaagctga tctcaaaatc ctgacctcag 2460 gtgatccgcc cacctcagcc tcccaaagtg ctgggattac aggcatgagc cactgcacct 2520 ggcctattta accattttaa aacttccctg ggctcaagtc acacccactg gtaaggagtt

tgttggttt	g tttgttttgt	tttgagaggd	ggtttcacto	ttgttgctca	ggctggaggg	3000
agtgcaatg	g cgcgatcttg	gcttactgca	gcctctgcct	cccaggttca	agtgattctc	3060
ctgcttccg	ctcccatttg	gctgggatta	caggcacccg	ccaccatgco	cagctaattt	3120
tttgtattt	tagtagagac	gggggtgggt	ggggttcacc	atgttggcca	ggctggtctc	3180
gaacttctga	a cctcagatga	tccacctgcc	tctgcctcct	aaagtgctgg	gattacaggt	3240
gtgagccac	atgcccagct	cagaatttac	tctgtttaga	aacatctggg	tctgaggtag	3300
gaagctcac	ccactcaagt	gttgtggtgt	tttaagccaa	tgatagaatt	tttttattgt	3360
tgttagaaca	ctcttgatgt	tttacactgt	gatgactaag	acatcatcag	cttttcaaag	3420
acacactaa	tgcacccata	atactggggt	gtcttctggg	tatcagcaat	cttcattgaa	3480
tgccgggagg	cgtttcctcg	ccatgcacat	ggtgttaatt	actccagcat	aatcttctgc	3540
ttccatttct	tctcttccct	cttttaaaat	tgtgttttct	atgttggctt	ctctgcagag	3600
aaccagtgta	agctacaact	taacttttgt	tggaacaaat	tttccaaacc	gcccctttgc	3660
cctagtggca	gagacaattc	acaaacacag	ccctttaaaa	aggcttaggg	atcactaagg	3720
ggatttctag	aagagcgacc	tgtaatccta	agtatttaca	agacgaggct	aacctccagc	3780
gagcgtgaca	gcccagggag	ggtgcgaggc	ctgttcaaat	gctagctcca	taaataaagc	3840
aatttcctcc	ggcagtttct	gaaagtagga	aaggttacat	ttaaggttgc	gtttgttagc	3900
atttcagtgt	ttgccgacct	cagctacagc	atccctgcaa	ggcctcggga	gacccagaag	3960
tttctcgccc	ccttagatcc	aaacttgagc	aacccggagt	ctggattcct	gggaagtcct	4020
cagctgtcct	gcggttgtgc	cggggcccca	ggtctggagg	ggaccagtgg	ccgtgtggct	4080
tctactgctg	ggctggaagt	cgggcctcct	agctctgcag	tccgaggctt	ggagccaggt	4140
gcctggaccc	cgaggctgcc	ctccaccctg	tgcgggcggg	atgtgaccag	atgttggcct	4200
catctgccag	acagagtgcc	ggggcccagg	gtcaaggccg	ttgtggctgg	tgtgaggcgc	4260
ccggtgcgcg	gccagcagga	gcgcctggct	ccatttccca	ccctttctcg	acgggaccgc	4320
cccggtgggt	gattaacaga	tttggggtgg	tttgctcatg	gtggggaccc	ctcgccgcct	4380
gagaacctgc	aaagagaaat	gacgggcctg	tgtcaaggag	cccaagtcgc	ggggaagtgt	4440
tgcagggagg	cactccggga	ggtcccgcgt	gcccgtccag	ggagcaatgc	gtcctcgggt	4500
tcgtccccag	ccgcgtctac	gcgcctccgt	cctccccttc	acgtccggca	ttcgtggtgc	4560
ccggagcccg	acgccccgcg	tccggacctg	gaggcagccc	tgggtctccg	gatcaggcca	4620
gcggccaaag	ggtcgccgca	cgcacctgtt	cccagggcct	ccacatcatg	gcccctccct	4680
cgggttaccc	cacagcctag	gccgattcga	cctctctccg	ctggggccct	cgctggcgtc	4740
cctgcaccct	gggagcgcga	gcggcgcgcg	ggcggggaag	cgcggcccag	acccccgggt	4800
ccgcccggag	cagctgcgct	gtcggggcca	ggccgggctc	ccagtggatt	cgcgggcaca	4860
			Page	,		

gacgcccagg accgcgctcc	ccacgtggcg	gagggactgg	ggacccgggc	acccgtcctg	4920
ccccttcacc ttccagctcc	gcctcctccg	cgcggacccc	gccccgtccc	gacccctccc	4980
gggtccccgg cccagccccc	tccgggccct	cccagcccct	ccccttcctt	tccgcggccc	5040
cgccctctcc tcgcggcgcg	agtttcaggc	agcgctgcgt	cctgctgcgc	acgtgggaag	5100
ccctggcccc ggccaccccc	gcgatg				5126
<210> 2 <211> 4042 <212> DNA <213> Homo sapiens					
gtttcaggca gcgctgcgtc	ctgctgcgca	cgtgggaagc	cctggccccg	gccacccccg	60
cgatgccgcg cgctccccgc	tgccgagccg	tgcgctccct	gctgcgcagc	cactaccgcg	120
aggtgctgcc gctggccacg	ttcgtgcggc	gcctggggcc	ccagggctgg	cggctggtgc	180
agcgcgggga cccggcggct	ttccgcgcgc	tggtggccca	gtgcctggtg	tgcgtgccct	240
gggacgcacg gccgccccc	gccgccccct	ccttccgcca	ggtgtcctgc	ctgaaggagc	300
tggtggcccg agtgctgcag	aggctgtgcg	agcgcggcgc	gaagaacgtg	ctggccttcg	360
gcttcgcgct gctggacggg	gcccgcgggg	gccccccga	ggccttcacc	accagcgtgc	420
gcagctacct gcccaacacg	gtgaccgacg	cactgcgggg	gagcggggcg	tgggggctgc	480
tgctgcgccg cgtgggcgac	gacgtgctgg	ttcacctgct	ggcacgctgc	gcgctctttg	540
tgctggtggc tcccagctgc	gcctaccagg	tgtgcgggcc	gccgctgtac	cagctcggcg	600
ctgccactca ggcccggccc	ccgccacacg	ctagtggacc	ccgaaggcgt	ctgggatgcg	660
aacgggcctg gaaccatagc	gtcagggagg	ccggggtccc	cctgggcctg	ccagccccgg	720
gtgcgaggag gcgcgggggc	agtgccagcc	gaagtctgcc	gttgcccaag	aggcccaggc	780
gtggcgctgc ccctgagccg	gagcggacgc	ccgttgggca	ggggtcctgg	gcccacccgg	840
gcaggacgcg tggaccgagt	gaccgtggtt	tctgtgtggt	gtcacctgcc	agacccgccg	900

aagaagccac ctctttggag ggtgcgctct ctggcacgcg ccactcccac ccatccgtgg

necessary concessary excessives entracease accordance taggarages 1020

aggaggacac	agacccccgt	cgcctggtgc	agctgctccg	ccagcacagc	agcccctggc	1440
aggtgtacgg	cttcgtgcgg	gcctgcctgc	gccggctggt	gcccccaggc	ctctggggct	1500
ccaggcacaa	cgaacgccgc	ttcctcagga	acaccaagaa	gttcatctcc	ctggggaagc	1560
atgccaagct	ctcgctgcag	gagctgacgt	ggaagatgag	cgtgcgggac	tgcgcttggc	1620
tgcgcaggag	cccaggggtt	ggctgtgttc	cggccgcaga	gcaccgtctg	cgtgaggaga	1680
tcctggccaa	gttcctgcac	tggctgatga	gtgtgtacgt	cgtcgagctg	ctcaggtctt	1740
tcttttatgt	cacggagacc	acgtttcaaa	agaacaggct	ctttttctac	cggaagagtg	1800
tctggagcaa	gttgcaaagc	attggaatca	gacagcactt	gaagagggtg	cagctgcggg	1860
agctgtcgga	agcagaggtc	aggcagcatc	gggaagccag	gcccgccctg	ctgacgtcca	1920
gactccgctt	catccccaag	cctgacgggc	tgcggccgat	tgtgaacatg	gactacgtcg	1980
tgggagccag	aacgttccgc	agagaaaaga	gggccgagcg	tctcacctcg	agggtgaagg	2040
cactgttcag	cgtgctcaac	tacgagcggg	cgcggcgccc	cggcctcctg	ggcgcctctg	2100
tgctgggcct	ggacgatatc	cacagggcct	ggcgcacctt	cgtgctgcgt	gtgcgggccc	2160
aggacccgcc	gcctgagctg	tactttgtca	aggtggatgt	gacgggcgcg	tacgacacca	2220
tccccagga	caggctcacg	gaggtcatcg	ccagcatcat	caaaccccag	aacacgtact	2280
gcgtgcgtcg	gtatgccgtg	gtccagaagg	ccgcccatgg	gcacgtccgc	aaggccttca	2340
agagccacgt	ctctaccttg	acagacctcc	agccgtacat	gcgacagttc	gtggctcacc	2400
tgcaggagac	cagcccgctg	agggatgccg	tcgtcatcga	gcagagctcc	tccctgaatg	2460
aggccagcag	tggcctcttc	gacgtcttcc	tacgcttcat	gtgccaccac	gccgtgcgca	2520
tcaggggcaa	gtcctacgtc	cagtgccagg	ggatcccgca	gggctccatc	ctctccacgc	2580
tgctctgcag	cctgtgctac	ggcgacatgg	agaacaagct	gtttgcgggg	attcggcggg	2640
acgggctgct	cctgcgtttg	gtggatgatt	tcttgttggt	gacacctcac	ctcacccacg	2700
cgaaaacctt	cctcaggacc	ctggtccgag	gtgtccctga	gtatggctgc	gtggtgaact	2760
tgcggaagac	agtggtgaac	ttccctgtag	aagacgaggc	cctgggtggc	acggcttttg	2820
ttcagatgcc	ggcccacggc	ctattcccct	ggtgcggcct	gctgctggat	acccggaccc	2880
tggaggtgca	gagcgactac	tccagctatg	cccggacctc	catcagagcc	agtctcacct	2940
tcaaccgcgg	cttcaaggct	gggaggaaca	tgcgtcgcaa	actctttggg	gtcttgcggc	3000
tgaagtgtca	cagcctgttt	ctggatttgc	aggtgaacag	cctccagacg	gtgtgcacca	3060
acatctacaa	gatcctcctg	ctgcaggcgt	acaggtttca	cgcatgtgtg	ctgcagctcc	3120
catttcatca	gcaagtttgg	aagaacccca	catttttcct	gcgcgtcatc	tctgacacgg	3180
cctccctctg	ctactccatc	ctgaaagcca	agaacgcagg	gatgtcgctg	ggggccaagg	3240
gcgccgccgg	ccctctgccc	tccgaggccg	tgcagtggct	gtgccaccaa	gcattcctgc	3300

tcaagctgac tcga	caccgt gtcacctacg	tgccactcct	ggggtcactc	aggacagccc	3360
agacgcagct gagt	cggaag ctcccgggga	cgacgctgac	tgccctggag	gccgcagcca	3420
acceggeact gece	tcagac ttcaagacca	tcctggactg	atggccaccc	gcccacagcc	3480
aggccgagag caga	caccag cagccctgtc	acgccgggct	ctacgtccca	gggagggagg	3540
ggcggcccac accca	aggccc gcaccgctgg	gagtctgagg	cctgagtgag	tgtttggccg	3600
aggcctgcat gtcc	ggctga aggctgagtg	tccggctgag	gcctgagcga	gtgtccagcc	3660
aagggctgag tgtc	cagcac acctgccgtc	ttcacttccc	cacaggctgg	cgctcggctc	3720
caccccaggg ccag	cttttc ctcaccagga	gcccggcttc	cactccccac	ataggaatag	3780
tccatcccca gatto	cgccat tgttcacccc	tcgccctgcc	ctcctttgcc	ttccaccccc	3840
accatccagg tggag	gaccct gagaaggacc	ctgggagctc	tgggaatttg	gagtgaccaa	3900
aggtgtgccc tgtac	cacagg cgaggaccct	gcacctggat	gggggtccct	gtgggtcaaa	3960
ttggggggag gtgc1	tgtggg agtaaaatac	tgaatatatg	agtttttcag	ttttgaaaaa	4020
aaaaaaaaaa aaaaa	aaaaaa aa				4042

<210> 3 <211> 11276 <212> DNA

<213> Homo sapiens

<400> 3

acttgagccc aagagttcaa ggctacggtg agccatgatt gcaacaccac acgccagcct 60 120 tcttctctgg ccacagtgga acaaaaccag aaatcaacaa caagaggaat tttgaaaact 180 atacaaacac atgaaaatta aacaatatac ttctgaatga ccagtgagtc aatgaagaaa 240 ttaaaaagga aattgaaaaa tttatttaag caaatgataa cggaaacata acctctcaaa 300 acccacggta tacagcaaaa gcagtgctaa gaaggaagtt tatagctata agcagctaca 360 420 tcaaaaaagt agaaaagcca ggcgcagtgg ctcatgcctg taatcccagc actttgggag gccaaggcgg gcagatcgcc tgaggtcagg agttcgagac cagcctgacc aacacagaga 480 aaccttgtcg ctactaaaaa tacaaaatta gctgggcatg gtggcacatg cctgtaatcc 540 600 cagctactcg ggaggctgag gcaggataac cgcttgaacc caggaggtgg aggttgcggt gagccgggat tgcgccattg gactccagcc tgggtaacaa gagtgaaacc ctgtctcaag 660 aaaaaaaaa aagtagaaaa acttaaaaat acaacctaat gatgcacctt aaagaactag 720 ANALOGO DE CENTRALE CETARANTE DE CETARANTE DE CONTRALES ANALOGOS DE CONTRALES DE CO

caaaggatca	ctagaggcta	ctatgagcaa	ctgtacacta	ataaattgaa	aaacctagaa	1020
aaaatagata	aattcctaga	tgcatacaac	ctaccaagat	tgaaccatga	agaaatccaa	1080
agcccaaaca	gaccaataac	aataatggga	ttaaagccat	aataaaaagt	ctcctagcaa	1140
agagaagccc	aggacccaat	ggcttccctg	ctggatttta	ccaatcattt	aaagaagaat	1200
gaattccaat	cctactcaaa	ctattctgaa	aaatagagga	aagaatactt	ccaaactcat	1260
tctacatggc	cagtattacc	ctgattccaa	aaccagacaa	aaacacatca	aaaacaaaca	1320
aacaaaaaa	cagaaagaaa	gaaaactaca	ggccaatatc	cctgatgaat	actgatacaa	1380
aaatcctcaa	caaaacacta	gcaaaccaaa	ttaaacaaca	ccttcgaaag	atcattcatt	1440
gtgatcaagt	gggatttatt	ccagggatgg	aaggatggtt	caacatatgc	aaatcaatca	1500
atgtgataca	tcatcccaac	aaaatgaagt	acaaaaacta	tatgattatt	tcactttatg	1560
cagaaaaagc	atttgataaa	attctgcacc	cttcatgata	aaaaccctca	aaaaaccagg	1620
tatacaagaa	acatacaggc	caggcacagt	ggctcacacc	tgcgatccca	gcactctggg	1680
aggccaaggt	gggatgattg	cttgggccca	ggagtttgag	actagcctgg	gcaacaaaat	1740
gagacctggt	ctacaaaaaa	cttttttaaa	aaattagcca	ggcatgatgg	catatgcctg	1800
tagtcccagc	tagtctggag	gctgaggtgg	gagaatcact	taagcctagg	aggtcgaggc	1860
tgcagtgagc	catgaacatg	tcactgtact	ccagcctaga	caacagaaca	agaccccact	1920
gaataagaag	aaggagaagg	agaagggaga	agggagggag	aagggaggag	gaggagaagg	1980
aggaggtgga	ggagaagtgg	aaggggaagg	ggaagggaaa	gaggaagaag	aagaaacata	2040
tttcaacata	ataaaagccc	tatatgacag	accgaggtag	tattatgagg	aaaaactgaa	2100
agcctttcct	ctaagatctg	gaaaatgaca	agggcccact	ttcaccactg	tgattcaaca	2160
tagtactaga	agtcctagct	agagcaatca	gataagagaa	agaaataaaa	ggcatccaaa	2220
ctggaaagga	agaagtcaaa	ttatcctgtt	tgcagatgat	atgatcttat	atctggaaaa	2280
gacttaagac	accactaaaa	aactattaga	gctgaaattt	ggtacagcag	gatacaaaat	2340
caatgtacaa	aaatcagtag	tatttctata	ttccaacagc	aaacaatctg	aaaaagaaac	2400
caaaaaagca	gctacaaata	aaattaaaca	gctaggaatt	aaccaaagaa	gtgaaagatc	2460
						2520

aggtgccaag	aacatacttt	ggggaaaaga	taatctcttc	aataaatggt	gctggaggaa	2940
ctggatatcc	atatgcaaaa	taacaatact	agaactctgt	ctctcaccat	atacaaaagc	3000
aaatcaaaat	ggatgaaagg	cttaaatcta	aaacctcaaa	ctttgcaact	actaaaagaa	3060
aacaccggag	aaactctcca	ggacattgga	gtgggcaaag	acttcttgag	taattccctg	3120
caggcacagg	caaccaaagc	aaaaacagac	aaatgggatc	atatcaagtt	aaaaagcttc	3180
tgcccagcaa	aggaaacaat	caacaaagag	aagagacaac	ccacagaatg	ggagaatata -	3240
tttgcaaact	attcatctaa	caaggaatta	ataaccagta	tatataagga	gctcaaacta	3300
ctctataaga	aaaacaccta	ataagctgat	tttcaaaaat	aagcaaaaga	tctgggtaga	3360
catttctcaa	aataagtcat	acaaatggca	aacaggcatc	tgaaaatgtg	ctcaacacca	3420
ctgatcatca	gagaaatgca	aatcaaaact	actatgagag	atcatctcat	cccagttaaa	3480
atggctttta	ttcaaaagac	aggcaataac	aaatgccagt	gaggatgtgg	ataaaaggaa	3540
acccttggac	actgttggtg	ggaatggaaa	ttgctaccac	tatggagaac	agtttgaaag	3600
ttcctcaaaa	aactaaaaat	aaagctacca	tacagcaatc	ccattgctag	gtatatactc	3660
caaaaaaggg	aatcagtgta	tcaacaagct	atctccactc	ccacatttac	tgcagcactg	3720
ttcatagcag	ccaaggtttg	gaagcaacct	cagtgtccat	caacagacga	atggaaaaag	3780
aaaatgtggt	gcacatacac	aatggagtac	tacgcagcca	taaaaaagaa	tgagatcctg	3840
tcagttgcaa	cagcatgggg	ggcactggtc	agtatgttaa	gtgaaataag	ccaggcacag	3900
aaagacaaac	ttttcatgtt	ctcccttact	tgtgggagca	aaaattaaaa	caattgacat	3960
agaaatagag	gagaatggtg	gttctagagg	ggtgggggac	agggtgacta	gagtcaacaa	4020
taatttattg	tatgttttaa	aataactaaa	agagtataat	tgggttgttt	gtaacacaaa	4080
gaaaggataa	atgcttgaag	gtgacagata	ccccatttac	cctgatgtga	ttattacaca	4140
ttgtatgcct	gtatcaaaat	atctcatgta	tgctatagat	ataaacccta	ctatattaaa	4200
aattaaaatt	ttaatggcca	ggcacggtgg	ctcatgtccg	taatcccagc	actttgggag	4260
gccgaggcgg	gtggatcacc	tgaggtcagg	agtttgaaac	cagtctggcc	accatgatga	4320
aaccctgtct	ctactaaaga	tacaaaaatt	agccaggcgt	ggtggcacat	acctgtagtc	4380
ccaactactc	2002000+02	<u> </u>	++ac++aaac	ctanazaaca	nannttacan	4440

4860 cctaaaacaa ctgctaataa tggtgaaagg taatctctat taattaccaa taattacaga 4920 tatctctaaa atcgagctgc agaattggca cgtctgatca caccgtcctc tcattcacgg 4980 tgcttttttt cttgtgtgct tggagatttt cgattgtgtg ttcgtgtttg gttaaactta 5040 atctgtatga atcctgaaac gaaaaatggt ggtgatttcc tccagaagaa ttagagtacc 5100 tggcaggaag caggtggctc tgtggacctg agccacttca atcttcaagg gtctctggcc 5160 aagacccagg tgcaaggcag aggcctgatg acccgaggac aggaaagctc ggatgggaag 5220 gggcgatgag aagcctgcct cgttggtgag cagcgcatga agtgccctta tttacgcttt 5280 gcaaagattg ctctggatac catctggaaa aggcggccag cgggaatgca aggagtcaga 5340 agcctcctgc tcaaacccag gccagcagct atggcgccca cccgggcgtg tgccagaggg 5400 agaggagtca aggcacctcg aagtatggct taaatctttt tttcacctga agcagtgacc 5460 aaggtgtatt ctgagggaag cttgagttag gtgccttctt taaaacagaa agtcatggaa 5520 gcacccttct caagggaaaa ccagacgccc gctctgcggt catttacctc tttcctctct 5580 ccctctcttg ccctcgcggt ttctgatcgg gacagagtga cccccgtgga gcttctccga 5640 gcccgtgctg aggaccctct tgcaaagggc tccacagacc cccgccctgg agagaggagt 5700 ctgagcctgg cttaataaca aactgggatg tggctggggg cggacagcga cggcgggatt 5760 caaagactta attccatgag taaattcaac ctttccacat ccgaatggat ttggatttta 5820 tcttaatatt ttcttaaatt tcatcaaata acattcagga ctgcagaaat ccaaaggcgt 5880 aaaacaggaa ctgagctatg tttgccaagg tccaaggact taataaccat gttcagaggg 5940 atttttcgcc ctaagtactt tttattggtt ttcataaggt ggcttagggt gcaagggaaa 6000 gtacacgagg agaggcctgg gcggcagggc tatgagcacg gcagggccac cggggagaga 6060 gtccccggcc tgggaggctg acagcaggac cactgaccgt cctccctggg agctgccaca 6120 ttgggcaacg cgaaggcggc cacgctgcgt gtgactcagg accccatacc ggcttcctgg 6180 gcccacccac actaacccag gaagtcacgg agctctgaac ccgtggaaac gaacatgacc

6780 acgtagctcg cacggttcct cctcacatgg ggtgtctgtc tccttcccca acactcacat 6840 gcgttgaagg gaggagattc tgcgcctccc agactggctc ctctgagcct gaacctggct 6900 cgtggccccc gatgcaggtt cctggcgtcc ggctgcacgc tgacctccat ttccaggcgc 6960 tccccgtctc ctgtcatctg ccggggcctg ccggtgtgtt cttctgtttc tgtgctcctt 7020 tccacgtcca gctgcgtgtg tctctgcccg ctagggtctc ggggttttta taggcatagg 7080 acgggggcgt ggtgggccag ggcgctcttg ggaaatgcaa catttgggtg tgaaagtagg 7140 agtgcctgtc ctcacctagg tccacgggca caggcctggg gatggagccc ccgccaggga 7200 cccgcccttc tctgcccagc actttcctgc ccccctccct ctggaacaca gagtggcagt 7260 ttccacaagc actaagcatc ctcttcccaa aagacccagc attggcaccc ctggacattt 7320 gccccacagc cctgggaatt cacgtgacta cgcacatcat gtacacactc ccgtccacga 7380 ccgacccccg ctgttttatt ttaatagcta caaagcaggg aaatccctgc taaaatgtcc 7440 tttaacaaac tggttaaaca aacgggtcca tccgcacggt ggacagttcc tcacagtgaa 7500 gaggaacatg ccgtttataa agcctgcagg catctcaagg gaattacgct gagtcaaaac 7560 tgccacctcc atgggatacg tacgcaacat gctcaaaaag aaagaatttc accccatggc 7620 aggggagtgg ttaggggggt taaggacggt gggggcggca gctggggggt actgcacgca 7680 ccttttacta aagccagttt cctggttctg atggtattgg ctcagttatg ggagactaac 7740 cataggggag tggggatggg ggaacccgga ggctgtgcca tctttgccat gcccgagtgt 7800 cctgggcagg ataatgctct agagatgccc acgtcctgat tcccccaaac ctgtggacag 7860 aacccgcccg gccccagggc ctttgcaggt gtgatctccg tgaggaccct gaggtctggg 7920 atccttcggg actacctgca ggcccgaaaa gtaatccagg ggttctggga agaggcgggc 7980 aggagggtca gaggggggca gcctcaggac gatggaggca gtcagtctga ggctgaaaag 8040 ggagggaggg cctcgagccc aggcctgcaa gcgcctccag aagctggaaa aagcggggaa 8100 gggaccetec acggageetg cageaggaag geaeggetgg eeettageee accagggeee 8160 atcgtggacc tccggcctcc gtgccatagg agggcactcg cgctgccctt ctagcatgaa 8220 gtgtgtgggg atttgcagaa gcaacaggaa acccatgcac tgtgaatcta ggattatttc 8280 aaaacaaagg tttacagaaa catccaagga cagggctgaa gtgcctccgg gcaagggcag 8340 8400 gttatgctct tgttgcccag gctggagtgc agcggcatga tcttggctca ctgcaacctc

8700 ggctcaagtc acacccactg gtaaggagtt catggagttc aatttcccct ttactcagga 8760 gttaccctcc tttgatattt tctgtaattc ttcgtagact ggggatacac cgtctcttga 8820 catattcaca gtttctgtga ccacctgtta tcccatggga cccactgcag gggcagctgg 8880 gaggctgcag gcttcaggtc ccagtggggt tgccatctgc cagtagaaac ctgatgtaga 8940 atcagggcgc aagtgtggac actgtcctga atctcaatgt ctcagtgtgt gctgaaacat 9000 gtagaaatta aagtccatcc ctcctactct actgggattg agccccttcc ctatccccc 9060 ccaggggcag aggagttcct ctcactcctg tggaggaagg aatgatactt tgttattttt 9120 9180 ggtttcactc ttgttgctca ggctggaggg agtgcaatgg cgcgatcttg gcttactgca 9240 gcctctgcct cccaggttca agtgattctc ctgcttccgc ctcccatttg gctgggatta 9300 caggcacccg ccaccatgcc cagctaattt tttgtatttt tagtagagac gggggtgggt 9360 ggggttcacc atgttggcca ggctggtctc gaacttctga cctcagatga tccacctgcc 9420 tctgcctcct aaagtgctgg gattacaggt gtgagccacc atgcccagct cagaatttac 9480 tctgtttaga aacatctggg tctgaggtag gaagctcacc ccactcaagt gttgtggtgt 9540 tttaagccaa tgatagaatt tttttattgt tgttagaaca ctcttgatgt tttacactgt 9600 gatgactaag acatcatcag cttttcaaag acacactaac tgcacccata atactggggt 9660 gtcttctggg tatcagcaat cttcattgaa tgccgggagg cgtttcctcg ccatgcacat

tgtcaaggag	cccaagtcgc	ggggaagtgt	tgcagggagg	cactccggga	ggtcccgcgt	10620
gcccgtccag	ggagcaatgc	gtcctcgggt	tcgtccccag	ccgcgtctac	gcgcctccgt	10680
cctcccttc	acgtccggca	ttcgtggtgc	ccggagcccg	acgccccgcg	tccggacctg	10740
gaggcagccc	tgggtctccg	gatcaggcca	gcggccaaag	ggtcgccgca	cgcacctgtt	10800
cccagggcct	ccacatcatg	gccctccct	cgggttaccc	cacagcctag	gccgattcga	10860
cctctctccg	ctggggccct	cgctggcgtc	cctgcaccct	gggagcgcga	gcggcgcgcg	10920
ggcggggaag	cgcggcccag	accccgggt	ccgcccggag	cagctgcgct	gtcggggcca	10980
ggccgggctc	ccagtggatt	cgcgggcaca	gacgcccagg	accgcgctcc	ccacgtggcg	11040
gagggactgg	ggacccgggc	acccgtcctg	ccccttcacc	ttccagctcc	gcctcctccg	11100
cgcggacccc	gccccgtccc	gacccctccc	gggtccccgg	cccagccccc	tccgggccct	11160
cccagcccct	ccccttcctt	tccgcggccc	cgccctctcc	tcgcggcgcg	agtttcaggc	11220
agcgctgcgt	cctgctgcgc	acgtgggaag	ccctggcccc	ggccaccccc	gcgatg	11276
<210> 4 <211> 104 <212> DNA <213> Homo	sapiens					
<400> 4	ccaaaatcaa	catccaacta	agattasaga	caaccaaaaa	4226624642	60
		cgtccggctg			yaaccaycya	104
cacycygaga	ycaycycayy	cgactcaggg	cycticccc	ycay		104
<210> 5 <211> 8616 <212> DNA <213> Homo						
<400> 5 gtgaggaggt	ggtggccgtc	gagggcccag	gccccagagc	tgaatgcagt	aggggctcag	60
aaaaaaaaaac	addcadadcc	ctaatcctcc	tatctccatc	atcacataaa	cacacataac	120

ttttcgctca ggacgtcgag tggacacggt gatctctgcc tctgctctcc ctcctgtcca

gtttgcataa acttacgagg ttcaccttca cgttttgatg gacacgcggt ttccaggcgc

180

taatcccagc	tacttgggag	gctgaggcag	gagaatcact	tgaacccagg	aggcggaggc	720
tgcagtgagc	tgagattgtg	ccattgtact	ccagcctggg	cgacaagagt	gaaactctgt	780
ctttaaaaaa	aaaaagtgtt	cgttgattgt	gccaggacag	ggtagaggga	gggagataag	840
actgttctcc	agcacagatc	ctggtcccat	ctttaggtat	gaagagggcc	acatgggagc	900
agaggacagc	agatggctcc	acctgctgag	gaagggacag	tgtttgtggg	tgttcagggg	960
atggtgctgc	tgggccctgc	cgtgtcccca	ccctgttttt	ctggatttga	tgttgaggaa	1020
cctccgctcc	agcccccttt	tggctcccag	tgctcccagg	ccctaccgtg	gcagctagaa	1080
gaagtcccga	tttcaccccc	tccccacaaa	ctcccaagac	atgtaagact	tccggccatg	1140
cagacaagga	gggtgacctt	cttggggctc	ttttttttt	tttttttt	ttatggtggc	1200
aaaagtcata	taacatgaga	ttggcactcc	taacaccgtt	ttctgtgtac	agtgcagaat	1260
tgctaactcg	gcggtgttta	cagcaggttg	cttgaaatgc	tgcgtcttgc	gtgactggaa	1320
gtccctaccc	atcgaacggc	agctgcctca	cacctgctgc	ggctcaggtg	gaccacgccg	1380
agtcagataa	gcgtcatgca	acccagtttt	gctttttgtg	ctccagcttc	cttcgttgag	1440
gagagtttga	gttctctgat	caggactctg	cctgtcattg	ctgttctctg	acttcagatg	1500
aggtcacaat	ctgcccctgg	cttatgcagg	gagtgaggcg	tggtccccgg	gtgtccctgt	1560
cacgtgcagg	gtgagtgagg	cgttgccccc	aggtgtccct	gtcacgtgta	gggtgagtga	1620
ggcgcggccc	ccgggtgtcc	ctgtcccgtg	cagcgtgatt	gaggtgtggc	ccccgggtgt	1680
ccctgtcacg	tgtagggtga	gtgaggcgcc	atccccgggt	gtccctgtca	cgtgtagggt	1740
gagtgaggcg	tggtccccgg	gtgtccctgt	cccgtgcagg	gtgagtgagg	cactgtcccc	1800
gggtgtccct	gtcacgtgca	gggtgagtga	ggcgcggtcc	ccgggtgtcc	ctctcaggtg	1860
tagggtgagt	gaggcgcggc	cccagggtgt	ccctgtcacg	tgtagggtga	gtgaggcacc	1920
gtccctgggt	gtccctccca	ggtatagggt	gagtgaggca	ctgtccccgg	gtgtccctgt	1980
cacgtgcagg	gtgagtgagg	cgcggccccc	gggtgtccct	ctcaggtgca	gggtgagtga	2040
ggcgctgtcc	ctgggtgtcc	ctgtctcgtg	tagggtgagt	gaggctctgt	ccccaggtgt	2100
ccttggcgtt	tgctcacttg	agcttgctcc	tgaatgtttg	ctctttctat	agccacagct	2160
gcgccggttg	cccattgcct	gggtagatgg	tgcaggcgca	gtgctggtcc	ccaagcctat	2220
cttttctgat	gctcggctct	tcttggtcac	ctctccgttc	cattttgcta	cggggacacg	2280
ggactgcagg	ctctcgcctc	ccgcgtgcca	ggcactgcag	ccacagcttc	aggtccgctt	2340
The Victorial Life	 4 Get 77.53 					2400

2640 gcaacgcttg tcaccttatt ctgggcacct gccgctcatt gcttaggctg ggctctgcct 2700 ccagtcgccc cctcacatgg attgacgtcc agccacaggt tggagtgtct ctgtctgtct 2760 cctgctctga gacccacgtg gagggccggt gtctccgcca gccttcgtca gacttccctc 2820 ttgggtctta gttttgaatt tcactgattt acctctgacg tttctatctc tccattgtat 2880 2940 cctctaagtg ctgccttacc tgcaccctgt gttttgatgt gaagtaatct caacatcagc 3000 cactttcaag tgttcttaaa atacttcaaa gtgttaatac ttcttttaag tattcttatt 3060 ctgtgatttt tttctttgtg cacgctgtgt tttgacgtga aatcattttg atatcagtga 3120 cttttaagta ttctttagct tattctgtga tttctttgag cagtgagtta tttgaacact 3180 gtttatgttc aagatatgta gagtatcaag atacgtagag tattttaagt tatcatttta ttattgattt ctaactcagt tgtgtagtgg tctgtataat accaattatt tgaagtttgc 3240 3300 ggagccttgc tttgtgatct agtgtgtgca tggtttccag aactgtccat tgtaaatttg 3360 acatcctgtc aatagtgggc atgcatgttc actatatcca gcttattaag gtccagtgca 3420 aagcttctgt ctccttctag atgcatgaaa ttccaagaag gaggccatag tccctcacct 3480 gggggatggg tctgttcatt tcttctcgtt tggtagcatt tatgtgaggc attgttaggt 3540 gcatgcacgt ggtagaattt ttatcttcct gatgagtgaa tcttttggag acttctatgt 3600 ctctagtaat ctagtaattc tttttttaaa ttgctcttag tactgccaca ctgggcttct 3660 tttgattagt attttcctgc tgtgtctgtt ttctgccttt aatttatata tatatatata 3720 ttttttttt ttttgagaca gagtcttggt ctgtcgccca gggtgagtgc agtggtgtga 3780 tcacaggtca gtgtaacttt taccttctgg cctgagccgt cctctcacct cagcctcctg 3840 agtagctgga actgcagaca cgcaccgcta cacctggcta atttttaaat tttttctgga 3900 gacagggtct tgctgtgttg cccaggctgg tctcaaactc ttggactcaa gggatccatc 3960 tacctcggct tcccaaagtg ctgaattaca ggcatgagcc accatgtctg gcctaatttt 4020 caacactttt atattcttat agtgtgggta tgtcctgtta acagcatgta ggtgaatttc

tcctgacctc	aagtgatctg	cccgccttgg	cctcccacag	tgctgggatt	acaggtgcaa	4560
gccaccgtgc	ccggcatacc	ttgatctttt	aaaatgaagt	ctgaaacatt	gctacccttg	4620
tcctgagcaa	taagaccctt	agtgtatttt	agctctggcc	acccccagc	ctgtgtgctg	4680
ttttccctgc	tgacttagtt	ctatctcagg	catcttgaca	ccccacaag	ctaagcatta	4740
ttaatattgt	tttccgtgtt	gagtgtttct	gtagctttgc	cccgccctg	cttttcctcc	4800
tttgttcccc	gtctgtcttc	tgtctcaggc	ccgccgtctg	gggtcccctt	ccttgtcctt	4860
tgcgtggttc	ttctgtcttg	ttattgctgg	taaaccccag	ctttacctgt	gctggcctcc	4920
atggcatcta	gcgacgtccg	gggacctctg	cttatgatgc	acagatgaag	atgtggagac	4980
tcacgaggag	ggcggtcatc	ttggcccgtg	agtgtctgga	gcaccacgtg	gccagcgttc	5040
cttagccagt	gagtgacagc	aacgtccgct	cggcctgggt	tcagcctgga	aaaccccagg	5100
catgtcgggg	tctggtggct	ccgcggtgtc	gagtttgaaa	tcgcgcaaac	ctgcggtgtg	5160
gcgccagctc	tgacggtgct	gcctggcggg	ggagtgtctg	cttcctccct	tctgcttggg	5220
aaccaggaca	aaggatgagg	ctccgagccg	ttgtcgccca	acaggagcat	gacgtgagcc	5280
atgtggataa	ttttaaaatt	tctaggctgg	gcgcggtggc	tcacgcctgt	aatcccagca	5340
ctttgggagg	ccaaggcggg	tggatcacga	ggtcaggagg	tcgagaccat	cctggccaac	5400
atgatgaaac	cccatctgta	ctaaaaacac	aaaaattagc	tgggcgtggt	ggcgggtgcc	5460
tgtaatccca	gctactcggg	aggctgaggc	aggagaattg	cttgaacctg	ggagttggaa	5520
gttgcagtga	gccgacattg	caccactgca	ctccagcctg	gcaacacagc	gagactctgt	5580
ctcaaaaaaa	aaaaaaaaaa	aaaaaaaaa	aattctagta	gccacattaa	aaaagtaaaa	5640
aagaaaaggt	gaaattaatg	taataataga	ttttactgaa	gcccagcatg	tccacacctc	5700
atcattttag	ggtgttattg	gtgggagcat	cactcacagg	acatttgaca	ttttttgagc	5760
tttgtctgcg	ggatcccgtg	tgtaggtccc	gtgcgtggcc	atctcggcct	ggacctgctg	5820
ggcttcccat	ggccatggct	gttgtaccag	atggtgcagg	tccgggatga	ggtcgccagg	5880
ccctcagtga	gctggatgtg	cagtgtccgg	atggtgcacg	tctgggatga	ggtcgccagg	5940
ccctgctgtg	agctggatgt	gtggtgtctg	gatggtgcag	gtcaggggtg	aggtctccag	6000
gccctcggtg	agctggaggt	atggagtccg	gatgatgcag	gtccggggtg	aggtcgccag	6060
gccctgctgt	gagctggatg	tgtggtgtct	ggatggtgca	ggtcaggggt	gaggtctcca	6120
ggccctcggt	aagctggagg	tatggagtcc	ggatgatgca	ggtccggggt	gaggtcgcca	6180
ggccctgctg	tgagctggat	gtgtggtgtc	tggatggtgc	aggtctgggg	tgaggtcacc	6240
aggccctgcg	gtgagctggg	tgtgcggtgt	ctggatggtg	caggtctgga	gtgaggtcgc	6300
cagacggtgc	cagaccatgc	ggtgagctgg	atatgcggtg	tccggatggt	gcaggtctgg	6360
ggtgaggttg	ccaggccctg	ctgtgagttg	gatgtggggt Page	gtccggatgc 15	tgcaggtccg	6420

gtgtgaggtc	accaggccct	gctgtgagct	ggatgtgtgg	tgtctggatg	gtgcaggtct	6480
ggggtgaagg	tcgccaggcc	cctgcttgtg	agctggatgt	gtggtgtctg	gatggtgcag	6540
gtctggagtg	aggtcgccag	gccctcggtg	agctggatgt	gcagtgtcca	gatggtgcag	6600
gtccggggtg	aggtcgccag	accctgcggt	gagctggatg	tgcggtgtct	ggatggtgca	6660
ggtctggagt	gaggtcgcca	ggccctcggt	gagctggatg	tatggagtcc	ggatggtgcc	6720
ggtccggggt	gaggtcgcca	gaccctgctg	tgagctggat	gtgcggtgtc	tggatggtac	6780
aggtctggag	tgaggtcgcc	agaccctgct	gtgagctgga	tatgcggtgt	ccggatggtg	6840
caggtcaggg	gtgaggtctc	caggccctcg	gtgagctgga	ggtatggagt	ccggatgatg	6900
caggtccggg	gtgaggtcgc	caggccctgc	tgtgaactgg	atgtgcggcg	tctggatggt	6960
gcaggtctgg	ggtgtggtcg	ccaggccctc	ggtgagctgg	aggtatggag	tccggatgat .	7020
gcaggtccgg	ggtgaggtcg	ccaggccctg	ctgtgagctg	gatgtgcggc	gtctggatgg	7080
tgcaggtctg	gggtgtggtc	gccaggccct	cggtgagctg	gaggtatgga	gtccggatga	7140
tgcaggtccg	gggtgaggtt	gccaggccct	gctgtgagct	ggatgtgctg	tatccggatg	7200
gtgcagtccg	gggtgaggtc	gccaggccct	gctgtgagct	ggatgtgctg	tatccggatg	7260
gtgcaggtct	ggggtgaggt	caccaggccc	tgcggtgagc	tggttgtgcg	gtgtccggtt	7320
gctgcaggtc	cggggtgagt	tcgccaggcc	ctcggtgagc	tggatgtgcg	gtgtccccgt	7380
gtccggatgg	tgcaggtcca	gggtgaggtc	gctaggccct	tggtgggctg	gatgtgccgt	7440
gtccggatgg	tgcaggtctg	gggtgaggtc	gccaggcctt	tggtgagctg	gatgtgcggt	7500
gtctgcatgg	tgcaggtctg	gggtgaggtc	gccaggccct	tggtgggctg	gatgtgtggt	7560
gtccggatgg	tgcaggtccg	gcgtgaggtc	gccaggccct	gctgtgagct	ggatgtgcgg	7620
tgtctggatg	gtgcaggtcc	ggggtgaggt	agccaaggcc	ttcggtgagc	tggatgtggg	7680
gtgtccggat	ggtgcaggtc	cggggtgagg	tcgccaggcc	ctgcggttag	ctggatatgc	7740
ggtgtccgga	tggtgcaggt	ccggggtgag	gtcaccaggc	cctgcggtta	gctggatgtg	7800
cggtgtctgg	atggtgcagg	tccggggtga	ggtcgccagg	ccctgctgtg	agctggatgt	7860
gctgtatccg	gatggtgcag	gtccggggtg	aggtcgccag	gccctgcagt	gagctggatg	7920
tgctgtatcc	ggatggtgca	ggtctggcgt	gaggtcgcca	ggccctgcgg	ttagctggat	7980
atgcggtgtc	ggatggtgca	ggtccggggt	gaggtcacca	ggccctgcgg	ttagctggat	8040
gtgcggtgtc	cggatggtgc	aggtctgggg	tgaggtcgcc	aggccctgct	gtgagctgga	8100
	The second second	to the first of the first of the control of the con	property and the property of the first of the	CONTRACTOR STATE OF THE STATE O		0160

tggatgtgtg gtgtctggat	gctgcaggtc	cggggtgagt	tcgccaggcc	ctcggtgagc	8400
tggatatgcg gtgtccccgt	gtccgaatgg	tgcaggtcca	gggtgaggtc	gccaggccct	8460
tggtgggctg gatgtgccgt	gtccggatgg	tgcaggtctg	gggtgaggtc	gccaggccct	8520
tggtgagctg gatgtgcggt	gtccggatgg	tgcaggtccg	gggtgaggtc	accaggccct	8580
cggtgatctg gatgtggcat	gtccttctcg	tttaag			8616
<210> 6 <211> 2089 <212> DNA <213> Homo sapiens					
<400> 6 gtactgtatc cccacgccag	gcctctgctt	ctcgaagtcc	tggaacacca	gcccggcctc	60
agcatgcgcc tgtctccact	tgcctgtgct	tccctggctg	tgcagctctg	ggctgggagc	120
caggggcccc gtcacaggcc	tggtccaagt	ggattctgtg	caaggctctg	actgcctgga	180
gctcacgttc tcttacttgt	aaaatcagga	gtttgtgcca	agtggtctct	agggtttgta	240
aagcagaagg gatttaaatt	agatggaaac	actaccacta	gcctccttgc	ctttccctgg	300
gatgtgggtc tgattctctc	tctctttttt	ttttcttttt	tgagatggag	tctcactctg	360
ttgcccaggc tggagtgcag	tggcataatc	ttggctcact	gcaacctcca	cctcctgggt	420
ttaagcgatt caccagcctc	agcctcctaa	gtagctggga	ttacaggcac	ctgccaccac	480
gcctggctaa tttttgtact	tttaggagag	acggggtttc	accatgttgg	ccaggctggt	540
ctcgaactca tgacctcagg	tgatccaccc	accttggcct	cccaaagtgc	tgggtttaca	600
ggctaagcca ccgtgcccag	ccccgattc	tcttttaatt	catgctgttc	tgtatgaatc	660
ttcaatctat tggatttagg	tcatgagagg	ataaaatccc	acccacttgg	cgactcactg	720
cagggagcac ctgtgcaggg	agcacctggg	gataggagag	ttccaccatg	agctaacttc	780
taggtggctg catttgaatg	gctgtgagat	tttgtctgca	atgttcggct	gatgagagtg	840
tgagattgtg acagattcaa	gctggatttg	catcagtgag	ggacgggagc	gctggtctgg	900
gagatgccag cctggctgag	cccaggccat	ggtattagct	tctccgtgtc	ccgcccaggc	960
tgactgtgga gggctttagt	cagaagatca	gggcttcccc	agctcccctg	cacactcgag	1020
tccctggggg gccttgtgac	accccatgcc	ccaaatcagg	atgtctgcag	agggagctgg	1080
cagcagacct cgtcagaggt	aacacagcct	ctgggctggg	gaccccgacg	tggtgctggg	1140
gccatttcct tgcatctggg	ggagggtcag	ggctttccct	gtgggaacaa	gttaatacac	1200
aatgcacctt acttagactt	tacacgtatt	taatggtgtg	cgacccaaca	tggtcatttg	1260
accagtattt tggaaagaat	ttaattgggg	tgaccggaag	gagcagacag	acgtggtggt	1320
ccccaagatg ctccttgtca	ctactgggac	tgttgttctg	cctggggggc	cttggaggcc	1380

1440 cctcctccct ggacagggta ccgtgccttt tctactctgc tgggcctgcg gcctgcggtc 1500 agggcaccag ctccggagca cccgcggccc cagtgtccac ggagtgccag gctgtcagcc 1560 acagatgccc aggtccaggt gtggccgctc cagcccccgt gcccccatgg gtggttttgg 1620 gggaaaaggc caagggcaga ggtgtcagga gactggtggg ctcatgagag ctgattctgc 1680 tccttggctg agctgccctg agcagcctct cccgccctct ccatctgaag ggatgtggct 1740 ctttctacct gggggtcctg cctggggcca gccttgggct accccagtgg ctgtaccaga 1800 gggacaggca tcctgtgtgg aggggcatgg gttcacgtgg ccccagatgc agcctgggac 1860 caggctccct ggtgctgatg gtgggacagt caccctgggg gttgaccgcc ggactgggcg 1920 tccccagggt tgactatagg accaggtgtc caggtgccct gcaagtagag gggctctcag 1980 aggcgtctgg ctggcatggg tggacgtggc cccgggcatg gccttcagcg tgtgctgccg 2040 tgggtgccct gagccctcac tgagtcggtg ggggcttgtg gcttcccgtg agcttccccc 2089 tagtctgttg tctggctgag caagcctcct gaggggctct ctattgcag

<210> 7 <211> 687 <212> DNA

<213> Homo sapiens

<400> 7 60 gtggctgtgc tttggtttaa cttccttttt aaacagaagt gcgtttgagc cccacatttg 120 gtatcagctt agatgaaggg cccggaggag gggccacggg acacagccag ggccatggca 180 cggcgccaac ccatttgtgc gcacagtgag gtggccgagg tgccggtgcc tccagaaaag 240 cagcgtgggg gtgtaggggg agctcctggg gcagggacag gctctgagga ccacaagaag 300 cagccgggcc agggcctgga tgcagcacgg cccgaggtcc tggatccgtg tcctgctgtg 360 gtgcgcagcc tccgtgcgct tccgcttacg gggcccgggg accaggccac gactgccagg 420 agcccaccgg gctctgagga tcctggacct tgccccacgg ctcctgcacc ccaccctgt 480 ggctgcggtg gctgcggtga ccccgtcatc tgaggagagt gtggggtgag gtggacagag 540 gtgtggcatg aggatcccgt gtgcaacaca catgcggcca ggaacccgtt tcaaacaggg 600 tctgaggaag ctgggagggg ttctaggtcc cgggtctggg tggctgggga cactggggag 660 gggctgcttc tcccctgggt ccctatggtg gggtgggcac ttggccggat ccactttcct 687 gactgtctcc catgctgtcc ccgccag

gcacctcatg ttgggt	ggag gaggtactcc	tgggtgggcc	gcagggagtg	caggtgaccc	120
tgtcactgtt gaggac	acac ctggcaccta	gggtggaggc	cttcagcctt	tcctgcagca	180
catggggccg actgtg	cacc ctgactgccc	gggctcctat	tcccaaggag	ggtcccactg	240
gattccagtt tccgtc	agag aaggaaccgc	aacggctcag	ccaccaggcc	ccggtgcctt	300
gcaccccagt cctgag	ccag gggtctcctg	tcctgaggct	cagagagggg	acacagcccg	360
ccctgccctt ggggtc	tgga gtggtggggg	tcagagagag	agtgggggac	accgccaggc	420
caggccctga gggcag	aggt gatgtctgag	tttctgcgtg	gccactgtca	gtctcctcgc	480
ctccactcac acag					494
<210> 9 <211> 865 <212> DNA <213> Homo sapie	ns				
<400> 9 gtaaggttca cgtgtg	atag tcgtgtccag	gatgtgtgtc	tctgggatat	gaatgtgtct	60
agaatgcagt cgtgtc	tgtg atgcgtttct	gtggtggagg	tacttccatg	atttacacat	120
ctgtgatatg cgtgtg	tggc acgtgtgtgt	cgtggtgcat	gtatctgtgg	cgtgcatatt	180
tgtggtgtgt gtgtgt	gtgg cacgtgtgtg	tccatggtgt	gtgtgcctgt	ggtgtgcatg	240
tgtgtgtgtc tgtgac	acgt gcatgttcat	gctgtgtgct	gcatgtctgt	gatgtgccta	300
tttgtggtgt gtgtgt	gcat gtgtccgtga	catatgcgtg	tctatggcat	gggtgtgtgt	360
ggccccttgg ccttac	tcct tcctcctcca	ggcatggtcc	gcaccattgt	cctcacgctc	420
tcgggtgctg gtttgg	ggag ctccacattc	agggtcctca	cttctagcat	gggtgcccct	480
gtcctgtcac agggct	gggc cttggagact	gtaagccagg	tttgagagga	gagtagggat	540
gctggtggta ccttcc	tgga cccctggcac	ccccaggacc	ccagtctggc	ctatgccggc	600
tccatgagat ataggaa	aggc tgattcaggc	ctcgctcccc	gggacacact	cctcccagag	660
cggccggggg ccttggg	ggct cggcaggggt	gaaaggggcc	ctgggcttgg	gttcccaccc	720
agtggtcatg agcacg	ctgg aggggtaagc	cctcaaagtc	gtgccaggcc	ggggtgcaga	780
ggtgaagaag tatccc	tgga gcttcggtct	ggggagaggc	acatgtggaa	acccacaagg	840
acctctttct ctgactt	cctt gagct				865
<210> 10 <211> 3782 <212> DNA <213> Homo sapier	าร				
<400> 10 tgtgggattg gttttca	itgt gtgggatagg	tggggatctg	tgggattggt	ttttatgagt	60
ggggtaacac agagtto	caag gcgagctttc	ttcctgtagt	gggtctgcag	gtgctccaac	120

180 agctttattg aggagaccat atcttccttt gaactatggt cgggtttata gtaagtcagg 240 ggtgtggagg cctccctgg gctccctgtt ctgtttcttc cactctgggg tcgtgtggtg 300 cctgctgtgg tgtgtggccg gtgggcaggg cttccaggcc tccttgtgtt cattggcctg 360 gatgtggccc tggctacgct ccgtccttgg aattcccctg cgagttggag gctttctttc 420 tttctttttt tctttctttt ttttttttt tgataacaga gtctcgctct tttttgccca 480 ggctggagtg gtttggcgtg atcttggctc actgcaacct gtgcttcctg agttcaagca 540 attctcttgc ctcagcctcc caagtagctg gaattatagg cgcccaccac catgctgact 600 aatttttgta attttagtag agacgaggtt tctccatgtt ggccaggctg gtctcgaact 660 cctgacctca ggtgatcctc ccacctcggc ctcccaaagt gctgggatga caggtgtgaa 720 ccgccgcgcc cggccgagac tcgcttcctg cagcttccgt gagatctgca gcgatagctg 780 cctgcagcct tggtgctgac aacctccgtt ttccttctcc aggtctcgct aggggtcttt 840 ccatttcatg actctcttca cagaagagtt tcacgtgtgc tgatttcccg gctgtttcct 900 gcgtaattgg tgtctgctgt ttatcgatgg cctccttcca tttcctttag gctttgttta 960 ttgttgtttt tccggctcct tgaaggaaaa gtttcgatta tggatgtttg aactttcttt 1020 tctaaacaag catctgaagt tgccgttttc cctctaaagc agggatcccg aggcccctgg 1080 ctgtggagtg gcaccggtct ggggcctgtt aggaacccgg cgcacagcgg gaggctaggt 1140 1200 gcggtgctca gaggcgcaca caccctactg agaactgtgc gtgagagggg tctagattct 1260 gtgctcctta tgggaatcta atgcctgatg atctgaggtg gaaccgtttg ctcccaaaac 1320 catccccttc cccactgctg tcctgtggaa aaatcgtctt ccacgaaacc agtccctggt 1380 accacaatgg ttggggaccc tgtgctaaag acctgcttca gcagcctctc gtcagtgttg 1440 atatattggc ttttctgtgt tgagtccaga ataattacgg atttctgtga tgctttccgc 1500 cgacctcaga cccatgggct atttgtgggc gtgttgcctg ctcctgggtt gggaagggtg 1560 caggccccat gtaccttcct gttactgcct tccaggttgg ttctcagggt tgaatcgtac 1620 tcgatgtggt tttagcccac ggccctgccg ccagctcctg ggggctgggg aacatgctga

gtggatggcg	gtcgtggggt	ctgatgtgtg	gtgactgtgg	atggcggtcg	tggggtctga	2100
tgtggtgact	gtggatggcg	gtcgtggggt	ctgatgtggt	gactgtggat	ggcggtcgtg	2160
gggtctgatg	tggtgactgt	ggatggcagt	cgtggggtct	gatgtgtggt	gactgtggat	2220
ggcggtcgtg	gggtctgatg	tggtgactgt	ggatggcagt	cgtggggtct	gatgtgtggt	2280
gactgtggat	ggcggtcgtg	gggtctgatg	tgtggtgact	gtggatggcg	gtcgtggggt	2340
ctgatgtgtg	gtgactgtgg	atggcggtcg	tggggtctga	tgtgtggtga	ctgtggatgg	2400
cggtcgtggg	gtctgatgtg	gtgactgtgg	atggcggtcg	tggggtctga	tgtgtggtga	2460
ctgtggatgg	tgatcggtca	caggggtctg	atgtgtggtg	actgtggatg	gcggtcgtgg	2520
ggtctgatgt	gtggtgactg	tggatggtga	tcggtcacag	gggtctgatg	tgtggtgact	2580
gtggatggcg	gtcgtggggt	ctgatgtgtg	gtgactgtgg	atggcggttg	gtcccggggg	2640
tctgatgtgt	ggtgactgtg	gatggcgatc	ggtcacaggg	gtctgatgtg	tggtgactgt	2700
ggatggcggt	cgtggggtct	gatgtgtggt	gactgtggat	ggcggtcgtg	gggtctgatg	2760
tgtggtgact	gtggatggcg	gtcgtggggt	ctgatgtggt	gactgtggat	ggcggtcgtg	2820
gggtctgatg	tggtgactgt	ggatggcggt	cgtggggtct	gatgtgtggt	gactgtggat	2880
ggcggttggt	cccgggggtc	tgatgtgtgg	tgactgtgga	tggcggtcgt	ggggtctgat	2940
gtggtgactg	tggatggcag	tcgtggggtc	tgatgtgtgg	tgactgtgga	tggcggtcgt	3000
ggggtctgat	gtgtggtgac	tgtggatggc	ggtcgtgggg	tctgatgtgt	ggtgactgtg	3060
gatggcggtc	gtggggtctg	atgtgtggtg	actgtggatg	gcggtcgtgg	ggtctgatgt	3120
ggtgactgtg	gatggcggtc	gtggggtctg	atgtgtggtg	actgtggatg	gtgatcggtc	3180
acaggggtct	gatgtgtggt	gactgtggat	ggcggtcgtg	gggtctgatg	tgtggtgact	3240
gtggatggcg	gtcgtggggt	ctgatgtggt	gactgtggat	ggcggtcgtg	gggtctgatg	3300
tgtggtgact	gtggatggcg	gtcgtagggt	ctgatgtgtg	gtgactgtgg	atggcagtcg	3360
gtcacagggg	tctgatgtgt	ggtgactgtg	gatggcggtc	gtggggtctg	atgtgtggtg	3420
actgtggatg	gcggtcgtgg	ggtctgatgt	gtggtgactg	tggatggcgg	tcgtggggtc	3480
tgatgtgtgg	tgactgtgga	tggcggtcgt	ggggtctgat	gtggtgactg	tggatggtga	3540
tcggtcacag	gggtctgatg	tgtggtagct	gcaggtggag	tcccaggtgt	gtctgtagct	3600
actttgcgtc	ctcggccccc	cggcccccgt	ttcccaaaca	gaagcttccc	aggcgctctc	3660
tgggcttcat	cccgccatcg	ggcttggccg	caggtccaca	cgtcctgatc	ggaagaaaca	3720
agtgcccagc	tctggccggg	gcaggccaca	tttgtggctc	atgccctctc	ctctgccggc	3780
ag						3782

<210> 11 <211> 980 <212> DNA

<213> Homo sapiens <400> 11 gtctgggcac tgccctgcag ggttgggcac ggactcccag cagtgggtcc tcccctgggc aatcactggg ctcatgaccg gacagactgt tggccctggg gggcagtggg gggaatgagc tgtgatgggg gcatgatgag ctgtgtgcct tggcgaaatc tgagctgggc catqccaqqc tgcgacaget getgeattea ggeacetget caegtttgae tgegeggeet etetecagtt ccgcagtgcc titgttcatg attigctaaa tgtcttctct gccagtittg atcttgaggc caaaggaaag gtgtcccct cctttaggag ggcaggccat gtttgagccg tgtcctgccc agctggcccc tcagtgctgg gtctgaggcc aaaggaaacg tgtccccctt cttaggagga cgggccgtgt ttgagccacg ccccgctgag cgggcctctc agtgctgggt ctgtccacgt ggccctgtgg ccctttgcag atgtggtctg tccacgtggc cctgtggctc tttgcagatg cctgttagca cttgctcggc tctaggggac agtcgtgtcc accgcatgag gctcagagac ctctgggcga atttccttgg ctcccagggt gggggtggag gtggcctggg ctgctgggac ccagaccctg tgcccggcag ctgggcagca actcctggat cacatatgcc atccgggcca cggtgggctg tgtgggtgtg agcccagctg gacccacagg tggcccagag gagacgttct gtgtcacaca ctctgcctaa gcccatgtgt gtctgcagag actcggcccg gccagcccac gatggccctg cattccagcc cagccccgca cttcatcaca aacactgacc ccaaaaggga cggagggtct tggccacgtg gtcctgcctg tctcagcacc caccggctca ctcccatgtg tctcccgtct gctttcgcag <210> 12 2485 <213> Homo sapiens <220> <221> misc_feature <222> (1)...(2485)<223> n is a, c, g, or t. <400> 12

60

120

180

240

300

360

420

480

540

600

660

720

780

840

900

960

980

400> 12
gtgagtcagg tggccaggtg ccattgccct gcgggtggct gggcgggctg gcagggcttc 60

tgctcacctc tctcctgccc cttccccact gnccttctgc ccggggccac cagagtctcc 120

ttttctggcc cccgccccct ccggctcctg ggctgcaggc tcccgaggcc ccggaaacat 180

ggctcgqctt qcqqcaqccq qaqcqqaqca qqtqccacac qaqqcctqqa aatqqcaaqc 240

480	gactagattt	ttctctctgt	gcgcgggctc	ccccgcgagg	gtcgtgtgac	tcctgtccct
540	cctgtggtgg	tctcgggggg	agtttgctcc	ı ttgaccgtgt	aagtgcgggg	cccatctgga
600	gccacactca	cactgggtga	gtcacacagc	gagagctgcc	ı ggcggcctgg	ccatggggca
660	agtaaaacca	ctggatttta	atcacgtcct	ctggtgccac	gccacagtgc	cggtggtaga
720	gtggtagcac	cctggggaga	cctgtgtgtg	tgcctgcgac	ggcaggcatc	cacacctccc
780	ggtggaacgt	tccgcagtca	agcaaggtca	caaggtcatc	cgtgcacact	ggaggaaatt
840	ttcggaagct	tgtgcacagc	gataaaggac	gtctccagcg	ctctgggatc	ggaggcctct
900	ggtatcagca	aatcactaat	cattataagt	ttaattattg	aatataacta	tttatttaaa
960	tctggaaaaa	gtacacacgt	atattaagta	ataattagaa	ttattaaagt	attataatat
1020	cacatgtgtg	gacacgtgtg	ttggccgagg	agagtgaatt	acatggcagc	cacaaattgc
1080	gaagccacca	cctccccaga	gacaaagtca	agaattcgct	ccaggcccac	taagcggccc
1140	ccgtccacgt	aagtcacgta	aagatggatc	gaattttatt	tcgtggtcgt	cgggcctcct
1200	acagacagga	tcatgccctg	gactgcgtcc	gtgaggtgat	tttggggaat	gtggcagggc
1260	gtccccatcg	cgaagctcta	cggacaggcc	ccctaggaca	tctgtcctgt	ggtgactgtg
1320	aaaactaaga	tgttgcccca	cttcaaaacc	ataaaaacgt	tggcctctga	tggtccagtt
1380	ttgactcgct	tctgcttgcg	caggggcgta	catgtgctca	tttcccatcc	acagagagag
1440	cagtcctctt	gcaaaaagtg	gtgcttctgt	gttggtgcgt	gactcctaga	gggctggccg
1500	ttctttttt	tttcttttct	gaaagcctct	caccagcaag	gtgatatctg	gcccatcact
1560	cgcgatctca	agtgcagtgg	cctgggcttg	ctgttgtctg	cggaacgtca	ttttttgaga
1620	ctcccgagca	ctgcctcagc	agcatttctc	cccgggttcc	acctccgcct	actcactgca
1680	tagtagagag	tttgtatttt	ctggctaatt	cccctgcgc	caggcaccca	gctgagatta
1740	atccacccac	acctcaggtg	cgaactcctg	aggctggtct	catgttggcc	gggtttttgc
1800	cggaaagcct	cacgcccagc	tgtgagccat	ggattacagg	caaagtgctg	ctcggcctcc
1860	tttgcagtag	aggtcttgtt	cgaaaataac	tagcgcttcc	tgaccaccta	ctttttaagg
1920	tggctgaggg	gctctgggga	cgtcctgtgg	acaggagtgg	tctcttagca	gctgcaagcg
1980	ttctgctctc	cacggggcta	ctttaggttc	ctgtgtgcac	gccatgcctt	tcgcgtggca
2040	cttctcgttg	agagtttctg	ccttgtttgg	cccttggcat	tgaaaacgca	actgtttgtc
2100	catgtagggt	gcagcggcta	ccgttggcgc	aaggttgtat	aactaggggc	gtcatgctga
2160	ggttaagcat	aaaggagtcc	gaaaaaaaaa	caaattcctt	tcaccgtgga	catgagtctt
2220	aaccttaatg	agatttaaga	ataaactcta	ggttctgtga	tcaagtgtct	tcattccggg
2280	gatctgtttc	cctgtggctg	tgtggtcaca	agagcaagga	ttgatgattc	aaagaaaacc
2340	ggtctcatct	tttgttcaga	gcagggattg	agagtgggga	gtgcatggtg	agccgcccca

ggtatgtttd	tgaggtgttt	gccggctgaa	tggtagacgt	gtcgtttgtg	tgtatgaggt	2400
tctgtgtctg	t g tgtggctc	ggtttgagtg	tacgcatgtc	cagcacatgc	cctgcccgtc	2460
tctcacctgt	gtcttcccgc	cccag				2485
<210> 13 <211> 198 <212> DNA <213> Hom						
<400> 13 gtgaggcctc	ctcttcccca	ggggggcttg	ggtgggggtt	gatttgcttt	tgatgcattc	60
agtgttaata	ttcctggtgc	tctggagacc	atgactgctc	tgtcttgagg	aaccagacaa	120
ggttgcagcc	ccttcttggt	atgaagccgc	acgggagggg	ttgcacagcc	tgaggactgc	180
gggctccacg	caggctctgt	ccagcggcca	tgtccagagg	cctcagggct	cagcaggcgg	240
gagggccgct	gccctgcatg	atgagcatgt	gaattcaaca	ccgaggaagc	acaccagctt	300
ctgtcacgtc	acccaggttc	cgttagggtc	cttggggaga	tggggctggt	gcagcctgag	360
gccccacatc	tcccagcagg	ccctcgacag	gtggcctgga	ctgggcgcct	cttcagccca	420
ttgcccatcc	cacttgcatg	gggtctacac	ccaaggacgc	acacacctaa	atatcgtgcc	480
aacctaatgt	ggttcaactc	agctggcttt	tattgacagc	agttactttt	tttttttaa	540
tactttaagt	tctagggtac	atgtgcacga	cgtgcaggtt	agttacatat	gtatacatgt	600
gccatgttgg	tgtgctgcac	ccattaactc	atcatttaca	ttaggtatat	ctcctaatgc	660
tatccctccc	cactccccc	atcccatgac	aggccctggt	gtgtgatgtt	ccccaccctg	720
tgtccaagtg	ttctcattgt	tcagttccca	cctgtgagtg	agaacatgtg	gtgtttggtt	780
ttctttcctt	gcaatagttt	gctcagagtg	atggtttcca	gcttcgtcca	tgtccctaca	840
aaggacatga	actcatcctt	ttttatgact	gcatagtatt	ccgtggtgta	tatgtgccac	900
attttcttaa	tccagtctat	catcgatgga	catttgggtt	ggttgcaagt	ctttgctact	960
gtgaatagtg	ccgcaataaa	catacgtgtg	catgtgtctt	tatagcagca	tgatttataa	1020
tcctttgggt	atatacccag	taatgggatg	gctgggtcaa	atggtatttc	tagttctaga	1080
tccttgagga	atcaccacac	tgtcttccac	aatggttgaa	ctagtttaca	ctcccaccaa	1140
cagtgtaaaa	gtgttctggt	gctggagagg	atgtggacag	cagttatttt	tttatgaaaa	1200
tagtatcact	gaacaagcag	acagttagtg	aaggatgcgt	caggaagcct	gcaggccaca	1260
cagccatttc	tctcgaagac	tccgggtttt	tcctgtgcat	cttttgaaac	tctagctcca	1320
attatagcat	gtacagtgga	tcaaggttct	tcttcattaa	ggttcaagtt	ctagattgaa	1380
ataagtttat	gtaacagaaa	caaaaatttc	ttgtacacac	aacttgctct	gggatttgga	1440
ggaaagtgtc	ctcgagctgg	cggcacactg	gtcagccctc	tgggacagga	tacctctggc	1500
ccatggtcat	ggggcgctgg	gcttgggcct	gagggtcaca Page 2	cagtgcacca ?4	tgcccagctt	1560

```
cctgtggata ggatctgggt ctcggatcat gctgaggacc acagctgcca tgctggtaaa
                                                                      1620
 gggcaccacg tggctcagag ggggcgaggt tcccagcccc agctttctta ccgtcttcag
                                                                      1680
 ttatttttcc ctaagagtct gagaagtggg gccgcgcctg atggccttcg ttcgtcttca
                                                                      1740
 gctggcacag aattgcacaa gctgatggta aacactgagt acttataatg aatgaggaat
                                                                      1800
 tgctgtagca gttaactgta gagagctcgt ctgttggaaa gaaatttaag tttttcattt
                                                                      1860
 aaccgctttg gagaatgtta ctttatttat ggctgtgtaa attgtttgac attcagtccc
                                                                      1920
 tcgtagacag atactacgta aaaagtgtaa agttaacctt gctgtgtatt ttcccttatt
                                                                      1980
 ttag
                                                                      1984
 <210>
        14
 <211>
        1871
        DNA
       Homo sapiens
 <400>
 gtgaggcccg tgccgtgtgt ctgtggggac ctccacagcc tgtgggcttt gcagttgagc
                                                                        60
 cccccgtgtc ctgcccctgg caccgcagcg ttgtctctgc caagtcctct ctctctgccg
                                                                       120
 gtgctggatc cgcaagagca gaggcgcttg gccgtgcacc caggcctggg ggcgcagggg
                                                                       180
 caccttcggg agggagtggg taccgtgcag gccctggtcc tgcagagacg cacccaggtt
                                                                       240
acacacgtgg tgagtgcagg cggtgacctg gctcctgctg ctctttggaa agtcaagagt
                                                                       300
ggcggctcct ggggccccag tgagaccccc aggagctgtg cacagggcct gcagggccga
                                                                       360
ggcggcagcc tcctccccag ggtgcacctg agcctgcgga gagcaggagc tgctgagtga
                                                                      420
gctggcccac agcgttcgct gcggtcacgt tcctgcgtgg ggttgtttgg gatcggtggg
                                                                      480
agaatttgga tttgctgagt gctgctgtct tgaaccacgg agatggctag gagtgggttt
                                                                      540
cagagttgat ttttgtgaat caaactaaaa tcaggcacag gggacctggc ctcagcacag
                                                                      600
gggattgtcc aatgtggtcc ccctcaaggg cgccccacag agccggtggg cttgttttaa
                                                                      660
agtgcgattt gacgagggac gagaaacctt gaaagctgta aagggaaccc tcagaaaatg
                                                                      720
tggccgccag gggtggtttc aggtgctttg ctgggctgtg tttgtgaaaa cccatttgga
                                                                      780
cccgccctcc aagtccaccc tccaggtcca ccctccaggg ccgccctggg ctgggggtat
                                                                      840
gcctggcgtt ccttgtgccg cagcccggag cacagcaggc tgtgcacatt taaatccact
                                                                      900
aagattcact cggggggagc ccaggtccca agcaactgag ggctcaggag tcctgaggct
                                                                      960
gctgagggga cagagcagac ggggaacgct gcttctgtgt ggcaagttcc tgagggtgct
                                                                     1020
ggccagggag gtggctcaga gtgtatgttg gggtcccacc gggggcagaa ctctgtctct
                                                                     1080
gatgagtcgg cagccatgta acaggaaggg gtggccacag ggagctggga atgcaccagg
                                                                     1140
ggagctgcgc agctggccga ggtcccaggg ccaggccaca ggaagggcag ggggacgccc
                                                                     1200
```

ggggccacag	cagaggccgc	aggaagggaa	ggggatgccc	aggccagagc	agaggctacc	1260
gggcacaggg	gggctccctg	agctgggtga	gcgaggctca	tgactcggcg	agggaacctc	1320
cttgacgtga	agctgacgac	tggtgttgcc	cagctcacag	cccagccagg	tcccgcgcct	1380
gagcaggaac	tcagaaccct	cccctttgtc	taaagcacag	cagatgcctt	cagggcatct	1440
aggagaaaac	aggcaaagtc	gttgagaaac	gtcttaaaag	aaggtgggat	ggtggcaatt	1500
tcttgtccag	attttagtct	gccccggacc	acagatgagt	ctataacggg	attgtggtgt	1560
tgccatgggg	acacatgaga	tggaccatca	cagaggccac	tggggctgca	cctcccatct	1620
gagtcctggc	tgtcccgggt	ccaggccagg	ttcttgcatg	ctcacctacc	tgtcctgccc	1680
gggagacagg	gaaagcaccc	cgaagtctgg	agcagggctg	ggtccaggct	cctcagagct	1740
cctgccaggc	ccagcaccct	gctccaaatc	accacttctc	tggggttttc	caaagcattt	1800
aacaagggtg	tcaggttacc	tcctgggtga	cggccccgca	tcctggggct	gacattgccc	1860
ctctgcctta	g					1871

<210> 15 <211> 3801 <212> DNA <213> Homo sapiens

<400> 15

C 44 111 17 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1						
gtgagcgcac	ctggccggaa	gtggagcctg	tgcccggctg	gggcaggtgc	tgctgcaggg	60
ccgttgcgtc	cacctctgct	tccgtgtggg	gcaggcgact	gccaatccca	aagggtcaga	120
ggccacaggg	tgcccctcgt	cccatctggg	gctgagcaga	aatgcatctt	tctgtgggag	180
tgagggtgct	cacaacggga	gcagttttct	gtgctatttt	ggtaaaagga	aatggtgcac	240
cagacctggg	tgcactgagg	tgtcttcaga	aagcagtctg	gatccgaacc	caagacgccc	300
gggccctgct	gggcgtgagt	ctctcaaacc	cgaacacagg	ggccctgctg	ggcatgagtc	360
cctctgaacc	cgagaccctg	gggccctgct	gggcgtgagt	ctctccgaac	ccagagactt	420
cagggccctt	ttgggcgtga	gtctctccgc	tgtgagcccc	acactccaag	gctcatccac	480
agtctacagg	atgccatgag	ttcatgatca	cgtgtgaccc	atcaggggac	agggccatgg	540
tgtgggggg	gtctctacaa	aattctgggg	tcttgtttcc	ccagagcccg	agagctcaag	600

ggacaggtgt	ttttttattc	tgtccttcga	taatatttac	tggtgctgtg	ctagaggccg	1080
gaactggggg	tgccttcctc	tgaaaggcac	accttcatgg	gaagagaaat	aagtggtgaa	1140
tggttgttaa	accagaggtt	taaactgggg	tcctgtcgtt	ctgagttaac	agtccagatc	1200
tggactttgc	ctctttccag	aatgctccct	ggggtttgct	tcatggggga	gcagcaggtg	1260
tggacaccct	cgtgatgggg	gagcagcagg	tgcagacgcc	ctcatgatgg	gggagtggca	1320
ggtgcagaca	cccttgtgca	tggtgcccag	catgtccctg	ttgcagctcc	ctccccacaa	1380
ggatgccggt	ctcctgtgct	ccccacagtc	cctgcttccc	tctcacagcc	ttacctggtc	1440
ctggcctcca	ctggctttgt	ctgcatgatt	tccacatttc	ctgggctccc	agcacctctt	1500
cgcctctccc	aggcacctct	gcagtgctgg	ccataccagt	cagctgtgaa	ctgtccactg	1560
cttattttgc	tccccatgaa	atgtatttt	taggacaggc	acccctggtt	ccagcctctg	1620
gcacagcatc	agtgaatgtt	attgaaggac	aaaggacaga	caaacaaatc	aggaaaatgg	1680
gttctctcta	aacacattgc	aaagccacag	aggctagtgc	aggatgggtg	ggcatcaggt	1740
catcagatgt	gggtccaatg	ccagaatatt	ctgtgctccc	aaaggccact	tggtcagagt	1800
gtgtgcttgc	agaggtggct	ctaaaagctc	agcagtggag	gcagtggttc	gccatactca	1860
gggtgaactc	acatcctctg	tgtctgaagt	atacagcaga	ggcttgaagg	gcatctggga	1920
gaagaaaaca	ggcaaaatga	ttaagaaaag	tgaaaaagga	aaagtggtaa	gatgggaatt	1980
ttcttgtcca	gattttagtc	tcccaaacca	cagctcagat	ggtagaatgt	ggtcagaact	2040
gatggacaga	acaatagaac	aaaacggaag	ccctatctct	cagaaacgtg	tgttaatgtg	2100
gtatgtggca	cagctgatgg	aaaagagagt	gtgtgtgtaa	ttttttttc	tgagaaaact	2160
gactggaagc	aaataagttg	tgtctttaca	gcatatacca	gagcagattc	taggtagaag	2220
aggagacaca	tgcaaacaac	accagcaaca	gaaataaaac	aaaagactca	aagggaaggg	2280
aggtgaacgt	tccctggttt	ggtgttgggg	aaggacacac	agggaggcgg	atgaaaccag	2340
tgaggcaacg	ggcattgctt	tcactgcaga	gaaactcagc	ttgcctgagc	cacagtgaaa	2400
atggccattc	cctggagcgt	ttgtgcacgt	gatttattta	aggcgccctg	tgaggtcctg	2460
cacattcatc	ctctcacttt	gttctcctaa	ccacctgaga	ggtagaggag	gaaaggctcc	2520
aggggagcag	ccgcccttgg	tcacccagct	ggcaaagggc	atgcatgatt	gcagcctggc	2580
ctcctgctcc	ggggcccttg	ctctgcccga	ggaccccaca	caagtcagac	ccataggctc	2640
agggtgagcc	ggagcccaag	gtcgtgttgg	ggatggctgt	gaaagaagaa	atggacgtct	2700
gatgcacact	tgggaaggtc	ctaccagcag	cgtcaaagaa	atgcatgtga	aactgacagc	2760
gagacccatc	cctcaaagaa	acgcacgtga	aactgatggc	gagacctgtc	cccatccctc	2820
atgctggctc	cttttctggg	cttgccaaga	gccagcatca	ggttgaggca	agctggaaag	2880
acttttctgg	aaagcagctt	gtttgcatgg	aagtcctcac Page	aatgtcctgt	gtcttcccag	2940
			raye	LI		

3000 taattccact tctgaagtga ccagacatta tcacgggtct tatttaccat ttccagtgtt 3060 ccaggcaggg ggacttgcca cagcaagtca cgaacctgcc caaatacagg gctaaggaga 3120 tattatgcat cacaaaactt gctctgccat taaacatttt tcaaagaatt tttgaagaat 3180 gtttaatggc acaaaacgtt tatttcaatg tagcagtgtt caaagctgga tgtaaaagaa 3240 cacaccccag gagcctgccg tgaatgtcat gtgtgttcat ctttggacat ggacatacat 3300 gggcagtgag tggtggtgag gccctggagg acatcggtgg gatgcctcca tcctgcccct 3360 ctggagacac catgtgtgcc acgtgcactc actggagccc tgtttagctg gtgccacctg 3420 gctcttccat ccctgagatt caaacacagt gagattcccc acgcccaact cagtgttctc 3480 ccacaaaaaa cctgagtcac acctgtgttc actcgaggga cgcccgggag ccagggctcc 3540 acagtttatt atgtgttttt ggctgagtta tgtgcagatc tcatcagggc agatgatgag 3600 tgcacaaaca cggccgtgcg aggtttggat acactcaaca tcactagcca ggtcctggtg 3660 gagtttggtc atgcagagtc tggatggcat gtagcatttg gagtccatgg agtgagcacc conferente mametacome acotaceceo ameoamocoo maoomeamo amoomeoma

ctctttcttg ttccatctga atggatgata aagcaaaaag taaaaactta aaatcccaga	840
gaggtttcta ccgtttctca ctctttcttg gcgactctag	880
<210> 17 <211> 3186 <212> DNA <213> Homo sapiens	
<400> 17 gtgagccgcc accaaggggt gcaggcccag cctccaggga ccctccgcgc tctgctcacc	60
tctgacccgg ggcttcacct tggaactcct gggttttagg ggcaaggaat gtcttacgtt	120
ttcagtggtg ctgctgcctg tgcacagttc tgttcgcgtg gctctgtgca aagcacctgt	180
tctccatctc tgggtagtgg taggagccgg tgtggcccca ggtgtcccca ctgtgcctgt	240
gcactggccg tgggacgtca tggaggccat cccagggcag caggggcatg gggtaaagag	300
atgtttatgg ggagtcttag cagaggaggc tgggaaggtg tctgaacagt agatgggaga	360
tcagatgccc ggaggatttg gggtctcagc aaagagggcc gaggtgggtg caggtgaggg	420
tcgctggccc caccccggg aaggtgcagc agagctgtgg ctccccacac agcccggcca	480
gcacctgtgc tctgggcatg gctgtgctcc tggaacgttc cctgtcctgg ctggtcaggg	540
ggtgcccctg ccaagaatcg acaactttat cacagaggga agggccaatc tgtggaggcc	600
acagggccag cttctgcctg gagtcagggc aggtggtggc acaagcctcg gggctgtacc	660
aaagggcagt cgggcaccac aggcccgggc ctccacctca acaggcctcc cgagccactg	720
ggagctgaat gccaggaggc cgaagccctc gccccatgag ggctgagaag gagtgtgagc	780
atttgtgtta cccagggccg aggctgcgcg aattaccgtg cacacttgat gtgaaatgag	840
gtcgtcgtct atcgtggaaa cccagcaagg gctcacggga gagttttcca ttacaaggtc	900
gtaccatgaa aatggttttt aacccgagtg cttgcgcctt catgctctgg cagggagggc	960
agagccacag ctgcatgtta ccgcctttgc accagctcca gaggcttggg accaggctgt	1020
ctcagttcca gggtgcgtcc ggctcagacc gccctcctct ctgccttctc tctctgcctc	1080
aaatcttccc tcgtttgcat ctccctgacg cgtgcctggg ccctcgtgca agctgcttga	1140
ctcctttccg gaaacccttg gggtgtgctg gatacaggtg ccactgagga ctggaggtgt	1200
ctgacactgt ggttgacccc agggtccagc tggcgtgctt ggggcctcct tgggccatga	1260
tgaggtcaga ggagttttcc caggtgaaaa ctcctgggaa actcccaggg ccatgtgacc	1320
tgccacctgc tcctcccata ttcagctcag tcttgtcctc atttccccac cagggtctct	1380
agctccgagg agctcccgta gagggcctgg gctcagggca gggcggctga gtttcccac	1440
ccatgtgggg acccttgggt agtcgcttga ttgggtagcc ctgaggaggc cgagatgcga	1500
tgggccacgg gccgtttcca aacacagagt caggcacgtg gaaggcccag gaatcccctt	1560
ccctcgaggc aggagtggga gaacggagag ctgggccccg atttcacggc agccaggctg Page 29	1620

cagtgggcga	ggctgtggtg	gtccacgtgg	cgctgggggc	ggggtctgat	tcaaatccgc	1680
tggggctcgg	ccttcctggc	ccgtgctggc	cgcgcctcca	cacgggcttg	gggtggacgc	1740
cccgacctct	agcaggtggc	tatttctccc	tttggaagag	agcccctcac	ccatgctagg	1800
tgtttccctc	ctgggtcagg	agcgtggccg	tgtggcaacc	ccgggacctt	aggcttattt	1860
atttgtttaa	aaacattctg	ggcctggctt	ccgttgttgc	taaatgggga	aaagacatcc	1920
cacctcagca	gagttactga	gaggctgaaa	ccggggtgct	ggcttgactg	gtgtgatctc	1980
aggtcattcc	agaagtggct	caggaagtca	gtgagaccag	gtacatgggg	ggctcaggca	2040
gtgggtgaga	tgaggtacac	ggggggctca	ggcagtgggt	gaggccaggt	acatgggggg	2100
ctcaggcact	gggtgagatg	aggtacacgg	ggggctcagg	cagagggtca	gaccaggtac	2160
acgggggctc	tgatcacacg	cacatatgag	cacatgtgca	catgtgctgt	ttcatggtag	2220
ccaggtctgt	gcacacctgc	cccaaagtcc	caggaagctg	agaggccaaa	gatggaggct	2280
gacagggctg	gcgcggtggc	tcacacctgt	agtcccagca	ctttgggagg	ccgaggcgag	2340
aggatccctt	gagcccagga	gtttaagacc	agcctgagca	acatagtaga	accccatctc	2400
tatgaaaaat	aaaaacaaaa	attagctgaa	catggtggtg	tgcgcctgta	gttccaatac	2460
ttgggaggct	gaagtgggag	gatcacttga	gcccaggagg	tggaagctgc	agtgagctga	2520
gattgcacca	ctgtactgca	gcctgggtga	cagagtgaga	gcccatctca	acaacaacaa	2580
agaagactga	caaatgcagt	ttcttggaaa	gaaacattta	gtaggaactt	aacctacaca	2640
cagaagccaa	gtcggtgtct	cggtgtcagt	gagatgagat	gatgggtcct	cacaccatca	2700
ccccagaccc	agggtttatg	caccacaggg	gcgggtggct	cagaagggat	gcgcaggacg	2760
ttgatatacg	atgacatcaa	ggttgtctga	cgaagggcag	gattcatgat	aagtacctgc	2820
tggtacacaa	ggaacaatgg	ataaactgga	aaccttagag	gccttcccgg	aacaggggct	2880
aatcagaagc	cagcatgggg	ggctggcatc	caggatggag	ctgcttcagc	ctccacatgc	2940
gtgttcatac	agatggtgca	cagaaacgca	gtgtacctgt	gcacacacag	acacgcagct	3000
actcgcacac	acaagcacac	acacagacat	gcatgcatgc	atccgtgtgt	gtgcacctgt	3060
gcccatgagg	aaacccatgc	atgtgcattc	atgcacgcac	acaggcaccg	gtgggcccat	3120
gcccacaccc	acgagcaccg	tctgattagg	aggcctttcc	tctgacgctg	tccgccatcc	3180
tctcag						3186

<210> 18 <211> 781 <212> DNA <213> Homo sapiens

ggagactgag	tgaatctggg	cttaggaagt	tcttacccct	tttcgcatca	ggaagtggtt	12(
taacccaacc	actgtcaggc	tcgtctgccc	gccctctcgt	ggggtgagca	gagcacctga	180
tggaagggac	aggagctgtc	tgggagctgc	catccttccc	accttgctct	gcctggggaa	24(
gcgctggggg	gcctggtctc	tcctgtttgc	cccatggtgg	gatttggggg	gcctggcctc	300
tcctgtttgc	cctgtggtgg	gattgggctg	tctcccgtcc	atggcactta	gggcccttgt	360
gcaaacccag	gccaagggct	taggaggagg	ccaggcccag	gctaccccac	ccctctcagg	420
agcagaggcc	gcgtatcacc	acgacagagc	cccgcgccgt	cctctgcttc	ccagtcaccg	480
tcctctgccc	ctggacactt	tgtccagcat	cagggaggtt	tctgatccgt	ctgaaattca	540
agccatgtcg	aacctgcggt	cctgagctta	acagcttcta	ctttctgttc	tttctgtgtt	600
gtggaaattt	cacctggaga	agccgaagaa	aacatttctg	tcgtgactcc	tgcggtgctt	660
gggtcgggac	agccagagat	ggagccaccc	cgcagaccgt	cgggtgtggg	cagctttccg	720
gtgtctcctg	ggaggggagc	tgggctgggc	ctgtgactcc	tcagcctctg	ttttccccca	780
g						781

240 tttctgatgc tgtgaggcag gaggggaagg agggtagggg atagacagtg ggagccccca 300 ccctggaaga cataacagta agtccaggcc cgaagggcag cagggatgct gggggcccag 360 cttgggcggc ggggatgatg gagggcctgg ccagggtggc agggatgatg ggggccccag 420 ctggggtggc aggggtgatg gggggggctg gtctgggtgg cggggaagat ggggaagcct 480 ggctgggccc cctcctcccc tgcctcccac ctgcagccgt ggatccggat gtgcttccct 540 ggtgcacatc ctctgggcca tcagctttca tggaggtggg gggcaggggc atgacaccat 600 cctgtataaa atccaggatt cctcctcctg aacgccccaa ctcaggttga aagtcacatt 660 ccgcctctgg ccattctctt aagagtagac caggattctg atctctgaag ggtgggtagg 720 gtggggcagt ggagggtgtg gacacaggag gcttcagggt ggggctggtg atgctctctc 780 atcctcttat catctcccag tctcatctct catcctctta tcatctccca gtctcatctg 840 tcttcctctt atctcccagt ctcatctgtc atcctcttac catctcccag tctcatctct 900 tatcctctta tctcctagtc tcatccagac ttacctccca gggcgggtgc caggctcgca 960 gtggagctgg acatacgtcc ttcctcaggc agaaggaact ggaaggattg cagagaacag 1020 gaggggcggc tcagagggac gcagtcttgg ggtgaagaaa cagcccctcc tcagaagttg 1080 gcttgggcca cacgaaaccg agggccctgc gtgagtggct ccagagcctt ccagcaggtc 1140 cctggtgggg ccttatggta tggccgggtc ctactgagtg caccttggac agggcttctg 1200 gtttgagtgc agcccggacg tgcctggtgt cggggtgggg gcttatggcc actggatatg 1260 gcgtcattta ttgctgctgc ttcagagaat gtctgagtga ccgagcctaa tgtgtatggt 1320 gggcccaagt ccacagactg tgtcgtaaat gcactctggt gcctggagcc cccgtatagg 1380 agctgtgagg aaggagggc tcttggcagc cggcctgggg gcgcctttgc cctgcaaact 1440 ggaagggagc ggccccgggc gccgtgggcg gacgacctca agtgagaggt tggacagaac 1500 agggcgggga cttcccagga gcagaggccg ctgctcaggc acacctgggt ttgaatcaca

ggtcatggct gcagtgagct gtgattgtac catcgcactc cagcctgggc aacagagtga	2160
gaccctgtct caaaaaaaaa aaaaaaaaaa gaaggagaag gagaagagaa gaagaa	2220
gaaggaaaga gaagaagaag gaagaaggaa gaaagaag	2280
taggtagact gtcaaatctc agagcaaaat gaaaataaca aagttttaaa gggaaagaaa	2340
aaccccagct ctttggactt ccttaggcct gaacttcatc tcaagcagct tccttccaca	2400
gacaagcgtg tatggagcga gtgagttcaa agcagaaagg gaggagaagc aggcaagggt	2460
ggaggctgtg ggtgacacca gccaggaccc ctgaaaggga gtggttgttt tcctgcctca	2520
gccccacgct cctgccggtc ctgcacctgc tgtaaccgtc gatgttggtg ccaggtgccc	2580
acctgggaag gatgctgtgc agggggcttg ccaaactttg gtgggtttca gaagccccag	2640
gcacttgtgg caggcacaat tacagcccct ccccaaagat gcccacgtcc ttctcctgga	2700
acctgtgaat gtgtcacccg caaggcagag gctggtgaag gctgcaggtg gaatcacggc	2760
tgccagtcag ccgatcttaa ggtcatcctg gattatctgg tgggcctgat atggccacaa	2820
gggtccctag aagtgagaga gggaggcagg ggagagtcag agaggggacg tgagaaggac	2880
cactggccac tgctggcttt gagatggagg agggggtccc cagccaagga atgggggcag	2940
ccgctccatg ctggaaaagc aagcaatcct ccccggtcct gagggcacac ggccctgccc	3000
acgcctcgat ttcaggccag tgggacctgt ttcagctttc cggcctccag agctgtaaga	3060
tgatgcgttt gtgttcagcc actaagctgc agtgattcgt cacagcagca aatggaatag	3120
cagtacaggg aaatgaatac agggacagtt ctcagagtga ctctcagccc acccctggg	3179
<210> 21 <211> 27 <212> DNA <213> Homo sapiens	
<400> 21 gttaagttgt agcttacact ggttctc	27
<210> 22 <211> 22 <212> DNA <213> Adapter primer	
<400> 22 gtaatacgac tcactatagg gc	22
<210> 23 <211> 19 <212> DNA <213> Adapter primer	
<400> 23 actatagggc acgcgtggt	19

-	<210> 24 <211> 22 <212> DNA <213> Primer	
	<400> 24 gacgtggctc ttgaaggcct tg	22
	<210> 25 <211> 22 <212> DNA <213> Primer	
	<400> 25 gccttctgga ccacggcata cc	22
	<210> 26 <211> 24 <212> DNA <213> Primer	
	<400> 26 cgtagttgag cacgctgaac agtg	24
	<210> 27 <211> 24 <212> DNA <213> Primer	
	<400> 27 ccttcaccct cgaggtgaga cgct	24
	<210> 28 <211> 23 <212> DNA <213> Primer	
	<400> 28 ggtggatgtg acgggcgct acg	23
	<210> 29 <211> 22 <212> DNA <213> Primer	
	<400> 29 ggtatgccgt ggtccagaag gc	22
	<210> 30 <211> 25 <212> DNA <213> Primer	
	<400> 30 cctccaaaga ggtggcttct tcggc	25
	<210> 31	

<211> <212> <213>	22 DNA Primer		
<400> cgcagco	31 cact accgcgaggt	gc	22
<210> <211> <212> <213>	32 27 DNA Primer		
<400> ctgcgto	32 cctg ctgcgcacgt	gggaagc	27
<210> <211> <212> <213>	33 23 DNA Primer		
<400> ctcgcgg	33 gcgc gagtttcagg	cag	23
<210> <211> <212> <213>	34 22 DNA Primer		
	34 cctc cccttccttt	сс	22
<210> <211> <212> <213>	35 21 DNA Primer		
<400> ccagcto	35 ccgc ctcctccgcg	C	21
<210> <211> <212> <213>	36 23 DNA Primer		
<400> ctaggco	36 cgat tcgacctctc	tcc	23
<210> <211> <212> <213>	37 21 DNA Primer		
<400> gtcccag	37 Jggc acgcacacca	g	21
<210> <211>	38 31		

<212> <213>	DNA Prin	ner					
<400> gcaagct	38 ttga	cgcagcgctg	cctgaaactc	g			31
<210> <211> <212> <213>	39 32 DNA Prin	ner					
<400> ccagate	39 ctct	ggaacacaga	gtggcagttt	сс			32
<210> <211> <212> <213>	40 33 DNA Prir	ner					
<400> ccagate	40 ctgc	atgaagtgtg	tggggatttg	cag			33
<210> <211> <212> <213>	41 32 DNA Prin	ner					
<400> ggagate	41 ctga	tcttggctta	ctgcagcctc	tg			32
<210> <211> <212> <213>	42 32 DNA Prir	ner					
	42 ctgt	ctggattcct	gggaagtcct	ca			32
<210> <211> <212> <213>	43 2643 DNA Homo	14 o sapiens					
<400>	43 accc	aagagttcaa	ggctacggtg	agccatgatt	gcaacaccac	acgccagcct	60
			gtctcaaaaa				120
tcttct	ctgg	ccacagtgga	acaaaaccag	aaatcaacaa	caagaggaat	tttgaaaact	180
atacaa	acac	atgaaaatta	aacaatatac	ttctgaatga	ccagtgagtc	aatgaagaaa	240
ttaaaaa	agga	aattgaaaaa	tttatttaag	caaatgataa	cggaaacata	acctctcaaa	300
acccac	ggta	tacagcaaaa	gcagtgctaa	gaaggaagtt	tatagctata	agcagctaca	360
tcaaaaa	aagt	agaaaagcca	ggcgcagtgg	ctcatgcctg	taatcccagc	actttgggag	420
gccaag	gcgg	gcagatcgcc	tgaggtcagg	agttcgagac Page	cagcctgacc 36	aacacagaga	480

aaccttgtcg	ctactaaaaa	tacaaaatta	gctgggcatg	gtggcacatg	cctgtaatcc.	540
cagctactcg	ggaggctgag	gcaggataac	cgcttgaacc	caggaggtgg	aggttgcggt	600
gagccgggat	tgcgccattg	gactccagcc	tgggtaacaa	gagtgaaacc	ctgtctcaag	660
aaaaaaaaa	aagtagaaaa	acttaaaaat	acaacctaat	gatgcacctt	aaagaactag	720
aaaagcaaga	gcaaactaaa	cctaaaattg	gtaaaagaaa	agaaataata	aagatcagag	780
cagaaataaa	tgaaactgaa	agataacaat	acaaaagatc	aacaaaatta	aaagttggtt	840
ttttgaaaag	ataaacaaaa	ttgacaaacc	tttgcccaga	ctaagaaaaa	aggaaagaag	900
acctaaataa	ataaagtcag	agatgaaaaa	agagacatta	caactgatac	cacagaaatt	960
caaaggatca	ctagaggcta	ctatgagcaa	ctgtacacta	ataaattgaa	aaacctagaa	1020
aaaatagata	aattcctaga	tgcatacaac	ctaccaagat	tgaaccatga	agaaatccaa	1080
agcccaaaca	gaccaataac	aataatggga	ttaaagccat	aataaaaagt	ctcctagcaa	1140
agagaagccc	aggacccaat	ggcttccctg	ctggatttta	ccaatcattt	aaagaagaat	1200
gaattccaat	cctactcaaa	ctattctgaa	aaatagagga	aagaatactt	ccaaactcat	1260
tctacatggc	cagtattacc	ctgattccaa	aaccagacaa	aaacacatca	aaaacaaaca	1320
aacaaaaaa	cagaaagaaa	gaaaactaca	ggccaatatc	cctgatgaat	actgatacaa	1380
aaatcctcaa	caaaacacta	gcaaaccaaa	ttaaacaaca	ccttcgaaag	atcattcatt	1440
gtgatcaagt	gggatttatt	ccagggatgg	aaggatggtt	caacatatgc	aaatcaatca	1500
atgtgataca	tcatcccaac	aaaatgaagt	acaaaaacta	tatgattatt	tcactttatg	1560
cagaaaaagc	atttgataaa	attctgcacc	cttcatgata	aaaaccctca	aaaaaccagg	1620
tatacaagaa	acatacaggc	caggcacagt	ggctcacacc	tgcgatccca	gcactctggg	1680
aggccaaggt	gggatgattg	cttgggccca	ggagtttgag	actagcctgg	gcaacaaaat	1740
gagacctggt	ctacaaaaaa	cttttttaaa	aaattagcca	ggcatgatgg	catatgcctg	1800
tagtcccagc	tagtctggag	gctgaggtgg	gagaatcact	taagcctagg	aggtcgaggc	1860
tgcagtgagc	catgaacatg	tcactgtact	ccagcctaga	caacagaaca	agaccccact	1920
****						1000

•

caaaaaagca	gctacaaata	aaattaaaca	gctaggaatt	aaccaaagaa	gtgaaagatc	2460
tctacaatga	aaactataaa	atgttgataa	aagaaattga	agagggcaca	aaaaaagaaa	2520
agatattcca	tgttcataga	ttggaagaat	aaatactgtt	aaaatgtcca	tactacccaa	2580
agcaatttac	aaattcaatg	caatccctat	taaaatacta	atgacgttct	tcacagaaat	2640
agaagaaaca	attctaagat	ttgtacagaa	ccacaaaaga	cccagaatag	ccaaagctat	2700
cctgaccaaa	aagaacaaaa	ctggaagcat	cacattacct	gacttcaaat	tatactacaa	2760
agctatagta	acccaaacta	catggtactg	gcataaaaac	agatgagaca	tggaccagag	2820
gaacagaata	gagaatccag	aaacaaatcc	atgcatctac	agtgaactca	tttttgacaa	2880
aggtgccaag	aacatacttt	ggggaaaaga	taatctcttc	aataaatggt	gctggaggaa	2940
ctggatatcc	atatgcaaaa	taacaatact	agaactctgt	ctctcaccat	atacaaaagc	3000
aaatcaaaat	ggatgaaagg	cttaaatcta	aaacctcaaa	ctttgcaact	actaaaagaa	3060
aacaccggag	aaactctcca	ggacattgga	gtgggcaaag	acttcttgag	taattccctg	3120
caggcacagg	caaccaaagc	aaaaacagac	aaatgggatc	atatcaagtt	aaaaagcttc	3180
tgcccagcaa	aggaaacaat	caacaaagag	aagagacaac	ccacagaatg	ggagaatata	3240
tttgcaaact	attcatctaa	caaggaatta	ataaccagta	tatataagga	gctcaaacta	3300
ctctataaga	aaaacaccta	ataagctgat	tttcaaaaat	aagcaaaaga	tctgggtaga	3360
catttctcaa	aataagtcat	acaaatggca	aacaggcatc	tgaaaatgtg	ctcaacacca	3420
ctgatcatca	gagaaatgca	aatcaaaact	actatgagag	atcatctcat	cccagttaaa	3480
atggctttta	ttcaaaagac	aggcaataac	aaatgccagt	gaggatgtgg	ataaaaggaa	3540
acccttggac	actgttggtg	ggaatggaaa	ttgctaccac	tatggagaac	agtttgaaag	3600
ttcctcaaaa	aactaaaaat	aaagctacca	tacagcaatc	ccattgctag	gtatatactc	3660
caaaaaaggg	aatcagtgta	tcaacaagct	atctccactc	ccacatttac	tgcagcactg	3720
ttcatagcag	ccaaggtttg	gaagcaacct	cagtgtccat	caacagacga	atggaaaaag	3780
aaaatgtggt	gcacatacac	aatggagtac	tacgcagcca	taaaaaagaa	tgagatcctg	3840
tcagttgcaa	cagcatgggg	ggcactggtc	agtatgttaa	gtgaaataag	ccaggcacag	3900
aaagacaaac	ttttcatgtt	ctcccttact	tgtgggagca	aaaattaaaa	caattgacat	3960
agaaatagag	gagaatggtg	gttctagagg	ggtgggggac	agggtgacta	gagtcaacaa	4020
taatttattg	tatgttttaa	aataactaaa	agagtataat	tgggttgttt	gtaacacaaa	4080
gaaaggataa	atgcttgaag	gtgacagata	ccccatttac	cctgatgtga	ttattacaca	4140
ttgtatgcct	gtatcaaaat	atctcatgta	tgctatagat	ataaacccta	ctatattaaa	4200
aattaaaatt	ttaatggcca	ggcacggtgg	ctcatgtccg	taatcccagc	actttgggag	4260
gccgaggcgg	gtggatcacc	tgaggtcagg	agtttgaaac	cagtctggcc	accatgatga	4320
			Page	30		

	aaccctgtct	ctactaaaga	tacaaaaatt	agccaggcgt	ggtggcacat	acctgtagtc	4380
	ccaactactc	aggaggctga	gacaggagaa	ttgcttgaac	ctgggaggcg	gaggttgcag	4440
	tgagccgaga	tcatgccact	gcactgcagc	ctgggtgaca	gagcaagact	ccatctcaaa	4500
	acaaaaacaa	aaaaaagaag	attaaaattg	taatttttat	gtaccgtata	aatatatact	4560
	ctactatatt	agaagttaaa	aattaaaaca	attataaaag	gtaattaacc	acttaatcta	4620
	aaataagaac	aatgtatgtg	gggtttctag	cttctgaaga	agtaaaagtt	atggccacga	4680
	tggcagaaat	gtgaggaggg	aacagtggaa	gttactgttg	ttagacgctc	atactctctg	4740
	taagtgactt	aattttaacc	aaagacaggc	tgggagaagt	taaagaggca	ttctataagc	4800
	cctaaaacaa	ctgctaataa	tggtgaaagg	taatctctat	taattaccaa	taattacaga	4860
	tatctctaaa	atcgagctgc	agaattggca	cgtctgatca	caccgtcctc	tcattcacgg	4920
	tgcttttttt	cttgtgtgct	tggagatttt	cgattgtgtg	ttcgtgtttg	gttaaactta	4980
	atctgtatga	atcctgaaac	gaaaaatggt	ggtgatttcc	tccagaagaa	ttagagtacc	5040
	tggcaggaag	caggtggctc	tgtggacctg	agccacttca	atcttcaagg	gtctctggcc	5100
	aagacccagg	tgcaaggcag	aggcctgatg	acccgaggac	aggaaagctc	ggatgggaag	5160
	gggcgatgag	aagcctgcct	cgttggtgag	cagcgcatga	agtgccctta	tttacgcttt	5220
	gcaaagattg	ctctggatac	catctggaaa	aggcggccag	cgggaatgca	aggagtcaga	5280
	agcctcctgc	tcaaacccag	gccagcagct	atggcgccca	cccgggcgtg	tgccagaggg	5340
	agaggagtca	aggcacctcg	aagtatggct	taaatctttt	tttcacctga	agcagtgacc	5400
	aaggtgtatt	ctgagggaag	cttgagttag	gtgccttctt	taaaacagaa	agtcatggaa	5460
	gcacccttct	caagggaaaa	ccagacgccc	gctctgcggt	catttacctc	tttcctctct	5520
	ccctctcttg	ccctcgcggt	ttctgatcgg	gacagagtga	ccccgtgga	gcttctccga	5580
•	gcccgtgctg	aggaccctct	tgcaaagggc	tccacagacc	cccgccctgg	agagaggagt	5640
	ctgagcctgg	cttaataaca	aactgggatg	tggctggggg	cggacagcga	cggcgggatt	5700
	caaagactta	attccatgag	taaattcaac	ctttccacat	ccgaatggat	ttggatttta	5760
	tcttaatatt	ttcttaaatt	tcatcaaata	acattcagga	ctgcagaaat	ccaaaggcgt	5820
	aaaacaggaa	ctgagctatg	tttgccaagg	tccaaggact	taataaccat	gttcagaggg	5880
	atttttcgcc	ctaagtactt	tttattggtt	ttcataaggt	ggcttagggt	gcaagggaaa	5940
	gtacacgagg	agaggcctgg	gcggcagggc	tatgagcacg	gcagggccac	cggggagaga	6000
	gtccccggcc	tgggaggctg	acag c aggac	cactgaccgt	cctccctggg	agctgccaca	6060
	ttgggcaacg	cgaaggcggc	cacgctgcgt	gtgactcagg	accccatacc	ggcttcctgg	6120
	gcccacccac	actaacccag	gaagtcacgg	agctctgaac	ccgtggaaac	gaacatgacc	6180
	cttgcctgcc	tgcttccctg	ggtgggtcaa	gggtaatgaa Page	gtggtgtgca 39	ggaaatggcc	6240

atgtaaatta	cacgactctg	ctgatgggga	ccgttccttc	catcattatt	catcttcacc	6300
			tcgggtgtga			6360
tacaaacacc	actcttttac	taggcccaca	gagcacggsc	cacacccctg	atatattaag	6420
agtccaggag	agatgaggct	gctttcagcc	accaggctgg	ggtgacaaca	gcggctgaac	6480
agtctgttcc	tctagactag	tagaccctgg	caggcactcc	cccagattct	agggcctggt	6540
tgctgcttcc	cgagggcgcc	atctgccctg	gagactcagc	ctggggtgcc	acactgaggc	6600
cagccctgtc	tccacaccct	ccgcctccag	gcctcagctt	ctccagcagc	ttcctaaacc	6660
ctgggtgggc	cgtgttccag	cgctactgtc	tcacctgtcc	cactgtgtct	tgtctcagcg	6720
acgtagctcg	cacggttcct	cctcacatgg	ggtgtctgtc	tccttcccca	acactcacat	6780
gcgttgaagg	gaggagattc	tgcgcctccc	agactggctc	ctctgagcct	gaacctggct	6840
cgtggccccc	gatgcaggtt	cctggcgtcc	ggctgcacgc	tgacctccat	ttccaggcgc	6900
tccccgtctc	ctgtcatctg	ccggggcctg	ccggtgtgtt	cttctgtttc	tgtgctcctt	6960
tccacgtcca	gctgcgtgtg	tctctgcccg	ctagggtctc	ggggtttta	taggcatagg	7020
acgggggcgt	ggtgggccag	ggcgctcttg	ggaaatgcaa	catttgggtg	tgaaagtagg	7080
agtgcctgtc	ctcacctagg	tccacgggca	caggcctggg	gatggagccc	ccgccaggga	7140
cccgcccttc	tctgcccagc	actttcctgc	cccctccct	ctggaacaca	gagtggcagt	7200
ttccacaagc	actaagcatc	ctcttcccaa	aagacccagc	attggcaccc	ctggacattt	7260
gccccacagc	cctgggaatt	cacgtgacta	cgcacatcat	gtacacactc	ccgtccacga	7320
ccgacccccg	ctgttttatt	ttaatagcta	caaagcaggg	aaatccctgc	taaaatgtcc	7380
tttaacaaac	tggttaaaca	aacgggtcca	tccgcacggt	ggacagttcc	tcacagtgaa	7440
gaggaacatg	ccgtttataa	agcctgcagg	catctcaagg	gaattacgct	gagtcaaaac	7500
tgccacctcc	atgggatacg	tacgcaacat	gctcaaaaag	aaagaatttc	accccatggc	7560
aggggagtgg	ttaggggggt	taaggacggt	gggggcggca	gctgggggct	actgcacgca	7620
ccttttacta	aagccagttt	cctggttctg	atggtattgg	ctcagttatg	ggagactaac	7680
cataggggag	tggggatggg	ggaacccgga	ggctgtgcca	tctttgccat	gcccgagtgt	7740
cctgggcagg	ataatgctct	agagatgccc	acgtcctgat	tccccaaac	ctgtggacag	7800
aacccgcccg	gccccagggc	ctttgcaggt	gtgatctccg	tgaggaccct	gaggtctggg	7860
atccttcggg	actacctgca	ggcccgaaaa	gtaatccagg	ggttctggga	agaggcgggc	7920
aggagggtca	gaggggggca	gcctcaggac	gatggaggca	gtcagtctga	ggctgaaaag	7980
ggagggaggg	cctcgagccc	aggcctgcaa	gcgcctccag	aagctggaaa	aagcggggaa	8040
gggaccctcc	acggagcctg	cagcaggaag	gcacggctgg	cccttagccc	accagggccc	8100
atcgtggacc	tccggcctcc	gtgccatagg	agggcactcg Page	cgctgccctt 40	ctagcatgaa	8160

gtgtgtgggg	atttgcagaa	gcaacaggaa	acccatgcac	tgtgaatcta	ggattatttc	8220
aaaacaaagg	tttacagaaa	catccaagga	cagggctgaa	gtgcctccgg	gcaagggcag	8280
ggcaggcacg	agtgatttta	tttagctatt	ttattttatt	tacttacttt	ctgagacaga	8340
gttatgctct	tgttgcccag	gctggagtgc	agcggcatga	tcttggctca	ctgcaacctc	8400
cgtctcctgg	gttcaagcaa	ttctcgtgcc	tcagcctccc	aagtagctgg	gatttcaggc	8460
gtgcaccacc	acacccggct	aattttgtat	ttttagtaga	gatgggcttt	caccatgttg	8520
gtcaagctga	tctcaaaatc	ctgacctcag	gtgatccgcc	cacctcagcc	tcccaaagtg	8580
ctgggattac	aggcatgagc	cactgcacct	ggcctattta	accattttaa	aacttccctg	8640
ggctcaagtc	acacccactg	gtaaggagtt	catggagttc	aatttcccct	ttactcagga	8700
gttaccctcc	tttgatattt	tctgtaattc	ttcgtagact	ggggatacac	cgtctcttga	8760
catattcaca	gtttctgtga	ccacctgtta	tcccatggga	cccactgcag	gggcagctgg	8820
gaggctgcag	gcttcaggtc	ccagtggggt	tgccatctgc	cagtagaaac	ctgatgtaga	8880
atcagggcgc	aagtgtggac	actgtcctga	atctcaatgt	ctcagtgtgt	gctgaaacat	8940
gtagaaatta	aagtccatcc	ctcctactct	actgggattg	agccccttcc	ctatccccc	9000
ccaggggcag	aggagttcct	ctcactcctg	tggaggaagg	aatgatactt	tgttatttt	9060
cactgctggt	actgaatcca	ctgtttcatt	tgttggtttg	tttgttttgt	tttgagaggc	9120
ggtttcactc	ttgttgctca	ggctggaggg	agtgcaatgg	cgcgatcttg	gcttactgca	9180
gcctctgcct	cccaggttca	agtgattctc	ctgcttccgc	ctcccatttg	gctgggatta	9240
caggcacccg	ccaccatgcc	cagctaattt	tttgtatttt	tagtagagac	gggggtgggt	9300
ggggttcacc	atgttggcca	ggctggtctc	gaacttctga	cctcagatga	tccacctgcc	9360
tctgcctcct	aaagtgctgg	gattacaggt	gtgagccacc	atgcccagct	cagaatttac	9420
tctgtttaga	aacatctggg	tctgaggtag	gaagctcacc	ccactcaagt	gttgtggtgt	9480
tttaagccaa	tgatagaatt	tttttattgt	tgttagaaca	ctcttgatgt	tttacactgt	9540
gatgactaag	acatcatcag	cttttcaaag	acacactaac	tgcacccata	atactggggt	9600
gtcttctggg	tatcagcaat	cttcattgaa	tgccgggagg	cgtttcctcg	ccatgcacat	9660
ggtgttaatt	actccagcat	aatcttctgc	ttccatttct	tctcttccct	cttttaaaat	9720
tgtgttttct	atgttggctt	ctctgcagag	aaccagtgta	agctacaact	taacttttgt	9780
tggaacaaat	tttccaaacc	gcccctttgc	cctagtggca	gagacaattc	acaaacacag	9840
ccctttaaaa	aggcttaggg	atcactaagg	ggatttctag	aagagcgacc	tgtaatccta	9900
agtatttaca	agacgaggct	aacctccagc	gagcgtgaca	gcccagggag	ggtgcgaggc	9960
ctgttcaaat	gctagctcca	taaataaagc	aatttcctcc	ggcagtttct	gaaagtagga	10020
aaggttacat	ttaaggttgc	gtttgttagc	atttcagtgt Page	ttgccgacct 41	cagctacagc	10080

atccctgcaa ggcctcggga gacccagaag tttctcgccc ccttagatcc aaacttgagc 10140 aacccggagt ctggattcct gggaagtcct cagctgtcct gcggttgtgc cggggcccca 10200 10260 ggtctggagg ggaccagtgg ccgtgtggct tctactgctg ggctggaagt cgggcctcct agctctgcag tccgaggctt ggagccaggt gcctggaccc cgaggctgcc ctccaccctg 10320 10380 tgcgggcggg atgtgaccag atgttggcct catctgccag acagagtgcc ggggcccagg gtcaaggccg ttgtggctgg tgtgaggcgc ccggtgcgcg gccagcagga gcgcctggct 10440 10500 ccatttccca ccctttctcg acgggaccgc cccggtgggt gattaacaga tttggggtgg 10560 tttgctcatg gtggggaccc ctcgccgcct gagaacctgc aaagagaaat gacgggcctg 10620 tgtcaaggag cccaagtcgc ggggaagtgt tgcagggagg cactccggga ggtcccgcgt gcccgtccag ggagcaatgc gtcctcgggt tcgtccccag ccgcgtctac gcgcctccgt 10680 10740 cctcccttc acgtccggca ttcgtggtgc ccggagcccg acgccccgcg tccggacctg gaggcagccc tgggtctccg gatcaggcca gcggccaaag ggtcgccgca cgcacctgtt 10800 10860 cccagggcct ccacatcatg gcccctccct cgggttaccc cacagcctag gccgattcga cctctctccg ctggggccct cgctggcgtc cctgcaccct gggagcgcga gcggcgcgcg 10920 10980 ggcggggaag cgcggcccag acccccgggt ccgcccggag cagctgcgct gtcggggcca 11040 ggccgggctc ccagtggatt cgcgggcaca gacgcccagg accgcgctcc ccacgtggcg gagggactgg ggacccgggc acccgtcctg ccccttcacc ttccagctcc gcctcctccg 11100 11160 cgcggacccc gcccgtccc gacccctccc gggtccccgg cccagccccc tccgggccct cccagcccct ccccttcctt tccgcggccc cgccctctcc tcgcggcgcg agtttcaggc 11220 11280 agcgctgcgt cctgctgcgc acgtgggaag ccctggcccc ggccaccccc gcgatgccgc 11340 gcgctccccg ctgccgagcc gtgcgctccc tgctgcgcag ccactaccgc gaggtgctgc 11400 cgctggccac gttcgtgcgg cgcctggggc cccagggctg gcggctggtg cagcgcgggg 11460 accoggogge tttccgcgcg ctggtggccc agtgcctggt gtgcgtgccc tgggacgcac 11520 ggccgccccc cgccgccccc tccttccgcc aggtgggcct ccccggggtc ggcgtccggc 11580 tggggttgag ggcggccggg gggaaccagc gacatgcgga gagcagcgca ggcgactcag 11640 ggcgcttccc ccgcaggtgt cctgcctgaa ggagctggtg gcccgagtgc tgcagaggct 11700 gtgcgagcgc ggcgcgaaga acgtgctggc cttcggcttc gcgctgctgg acggggcccg 11760 cgggggcccc cccgaggcct tcaccaccag cgtgcgcagc tacctgccca acacggtgac cgacgcactg cgggggagcg gggcgtgggg gctgctgctg cgccgcgtgg gcgacgacgt 11820 gctggttcac ctgctggcac gctgcgcgct ctttgtgctg gtggctccca gctgcgccta 11880 11940 ccaggtgtgc gggccgccgc tgtaccagct cggcgctgcc actcaggccc ggcccccgcc

ggaggccggg	gtcccctgg	gcctgccagc	cccgggtgcg	aggaggcgcg	ggggcagtgc	12060
cagccgaagt	ctgccgttgc	ccaagaggcc	caggcgtggc	gctgcccctg	agccggagcg	12120
gacgcccgtt	gggcaggggt	cctgggccca	cccgggcagg	acgcgtggac	cgagtgaccg	12180
tggtttctgt	gtggtgtcac	ctgccagacc	cgccgaagaa	gccacctctt	tggagggtgc	12240
gctctctggc	acgcgccact	cccacccatc	cgtgggccgc	cagcaccacg	caggcccccc	12300
atccacatcg	cggccaccac	gtccctggga	cacgccttgt	ccccggtgt	acgccgagac	12360
caagcacttc	ctctactcct	caggcgacaa	ggagcagctg	cggccctcct	tcctactcag	12420
ctctctgagg	cccagcctga	ctggcgctcg	gaggctcgtg	gagaccatct	ttctgggttc	12480
caggccctgg	atgccaggga	ctcccgcag	gttgccccgc	ctgccccagc	gctactggca	12540
aatgcggccc	ctgtttctgg	agctgcttgg	gaaccacgcg	cagtgcccct	acggggtgct	12600
cctcaagacg	cactgcccgc	tgcgagctgc	ggtcacccca	gcagccggtg	tctgtgcccg	12660
ggagaagccc	cagggctctg	tggcggcccc	cgaggaggag	gacacagacc	cccgtcgcct	12720
ggtgcagctg	ctccgccagc	acagcagccc	ctggcaggtg	tacggcttcg	tgcgggcctg	12780
cctgcgccgg	ctggtgcccc	caggcctctg	gggctccagg	cacaacgaac	gccgcttcct	12840
caggaacacc	aagaagttca	tctccctggg	gaagcatgcc	aagctctcgc	tgcaggagct	12900
gacgtggaag	atgagcgtgc	gggactgcgc	ttggctgcgc	aggagcccag	gtgaggaggt	12960
ggtggccgtc	gagggcccag	gccccagagc	tgaatgcagt	aggggctcag	aaaagggggc	13020
aggcagagcc	ctggtcctcc	tgtctccatc	gtcacgtggg	cacacgtggc	ttttcgctca	13080
ggacgtcgag	tggacacggt	gatctctgcc	tctgctctcc	ctcctgtcca	gtttgcataa	13140
acttacgagg	ttcaccttca	cgttttgatg	gacacgcggt	ttccaggcgc	cgaggccaga	13200
gcagtgaaca	gaggaggctg	ggcgcggcag	tggagccggg	ttgccggcaa	tggggagaag	13260
tgtctggaag	cacagacgct	ctggcgaggg	tgcctgcagg	ttacctataa	tcctcttcgc	13320
aatttcaagg	gtgggaatga	gaggtgggga	cgagaacccc	ctcttcctgg	gggtgggagg	13380
taagggtttt	gcaggtgcac	gtggtcagcc	aatatgcagg	tttgtgttta	agatttaatt	13440
gtgtgttgac	ggccaggtgc	ggtggctcac	gccggtaatc	ccagcacttt	gggaagctga	13500
ggcaggtgga	tcacctgagg	tcaggagttt	gagaccagcc	tgaccaacat	ggtgaaaccc	13560
tatctgtact	aaaaatacaa	aaattagctg	ggcatggtgg	tgtgtgcctg	taatcccagc	13620
tacttgggag	gctgaggcag	gagaatcact	tgaacccagg	aggcggaggc	tgcagtgagc	13680
tgagattgtg	ccattgtact	ccagcctggg	cgacaagagt	gaaactctgt	ctttaaaaaa	13740
aaaaagtgtt	cgttgattgt	gccaggacag	ggtagaggga	gggagataag	actgttctcc	13800
agcacagatc	ctggtcccat	ctttaggtat	gaagagggcc	acatgggagc	agaggacagc	13860
agatggctcc	acctgctgag	gaagggacag	tgtttgtggg Page	tgttcagggg	atggtgctgc	13920
			raye	T J		

tgggccctgc cgtgtcccca ccctgttttt ctggatttga tgttgaggaa cctccgctcc 13980 agcccccttt tggctcccag tgctcccagg ccctaccgtg gcagctagaa gaagtcccga 14040 tttcaccccc tccccacaaa ctcccaagac atgtaagact tccggccatg cagacaagga 14100 14160 gggtgacctt cttggggctc ttttttttct tttttcttt ttatggtggc aaaagtcata 14220 taacatgaga ttggcactcc taacaccgtt ttctgtgtac agtgcagaat tgctaactcg 14280 gcggtgttta cagcaggttg cttgaaatgc tgcgtcttgc gtgactggaa gtccctaccc 14340 atcgaacggc agctgcctca cacctgctgc ggctcaggtg gaccacgccg agtcagataa 14400 gcgtcatgca acccagtttt gctttttgtg ctccagcttc cttcgttgag gagagtttga 14460 gttctctgat caggactctg cctgtcattg ctgttctctg acttcagatg aggtcacaat 14520 ctgccctgg cttatgcagg gagtgaggcg tggtccctgg gtgtccctgt cacgtgcagg 14580 gtgagtgagg cgttgcccc aggtgtccct gtcacgtgta gggtgagtga ggcgcggccc 14640 ccgggtgtcc ctgtcccgtg cagcgtgatt gaggtgtggc ccccgggtgt ccctgtcacg 14700 tgtagggtga gtgaggcgcc atccccgggt gtccctgtca cgtgtagggt gagtgaggcg 14760 tggtccccgg gtgtccctgt cccgtgcagg gtgagtgagg cactgtcccc gggtgtccct

ctgccttacc tgcaccctgt gttttgatgt gaagtaatct caacatcagc cactttcaag 15900 15960 tgttcttaaa atacttcaaa gtgttaatac ttcttttaag tattcttatt ctgtgatttt 16020 tttctttgtg cacgctgtgt tttgacgtga aatcattttg atatcagtga cttttaagta ttctttagct tattctgtga tttctttgag cagtgagtta tttgaacact gtttatgttc 16080 aagatatgta gagtatcaag atacgtagag tattttaagt tatcatttta ttattgattt 16140 ctaactcagt tgtgtagtgg tctgtataat accaattatt tgaagtttgc ggagccttgc 16200 16260 tttgtgatct agtgtgtgca tggtttccag aactgtccat tgtaaatttg acatcctgtc 16320 aatagtgggc atgcatgttc actatatcca gcttattaag gtccagtgca aagcttctgt 16380 ctccttctag atgcatgaaa ttccaagaag gaggccatag tccctcacct ggggggatggg 16440 tctgttcatt tcttctcgtt tggtagcatt tatgtgaggc attgttaggt gcatgcacgt ggtagaattt ttatcttcct gatgagtgaa tcttttggag acttctatgt ctctagtaat 16500 16560 ctagtaattc tttttttaaa ttgctcttag tactgccaca ctgggcttct tttgattagt attttcctgc tgtgtctgtt ttctgccttt aatttatata tatatata ttttttttt 16620 ttttgagaca gagtcttggt ctgtcgccca gggtgagtgc agtggtgtga tcacaggtca 16680 gtgtaacttt taccttctgg cctgagccgt cctctcacct cagcctcctg agtagctgga 16740 16800 actgcagaca cgcaccgcta cacctggcta atttttaaat tttttctgga gacagggtct tgctgtgttg cccaggctgg tctcaaactc ttggactcaa gggatccatc tacctcggct 16860 tcccaaagtg ctgaattaca ggcatgagcc accatgtctg gcctaatttt caacactttt 16920 16980 atattcttat agtgtgggta tgtcctgtta acagcatgta ggtgaatttc caatccagtc 17040 tgacagtcgt tgtttaactg gataacctga tttattttca tttttttgtc actagagacc 17100 cgcctggtgc actctgattc tccacttgcc tgttgcatgt cctcgttccc ttgtttctca 17160 ccacctcttg ggttgccatg tgcgtttcct gccgagtgtg tgttgatcct ctcgttgcct 17220 cctggtcact gggcatttgc ttttatttct ctttgcttag tgttaccccc tgatcttttt 17280 attgtcgttg tttgcttttg tttattgaga cagtctcact ctgtcaccca ggctggagtg taatggcaca atctcggctc actgcaacct ctgcctcctc ggttcaagca gttctcattc 17340 ctcaacctca tgagtagctg ggattacagg cgcccaccac cacgcctggc taatttttgt 17400

17820 gtctgtcttc tgtctcaggc ccgccgtctg gggtcccctt ccttgtcctt tgcgtggttc 17880 ttctgtcttg ttattgctgg taaaccccag ctttacctgt gctggcctcc atggcatcta gcgacgtccg gggacctctg cttatgatgc acagatgaag atgtggagac tcacgaggag 17940 ggcggtcatc ttggcccgtg agtgtctgga gcaccacgtg gccagcgttc cttagccagt 18000 18060 gagtgacagc aacgtccgct cggcctgggt tcagcctgga aaaccccagg catgtcgggg 18120 tctggtggct ccgcggtgtc gagtttgaaa tcgcgcaaac ctgcggtgtg gcgccagctc 18180 tgacggtgct gcctggcggg ggagtgtctg cttcctccct tctgcttggg aaccaggaca 18240 aaggatgagg ctccgagccg ttgtcgccca acaggagcat gacgtgagcc atgtggataa 18300 ttttaaaatt tctaggctgg gcgcggtggc tcacgcctgt aatcccagca ctttgggagg 18360 ccaaggcggg tggatcacga ggtcaggagg tcgagaccat cctggccaac atgatgaaac 18420 cccatctgta ctaaaaacac aaaaattagc tgggcgtggt ggcgggtgcc tgtaatccca 18480 gctactcggg aggctgaggc aggagaattg cttgaacctg ggagttggaa gttgcagtga gccgacattg caccactgca ctccagcctg gcaacacagc gagactctgt ctcaaaaaaa 18540 18600 aaaaaaaaaa aaaaaaaaaa aattctagta gccacattaa aaaagtaaaa aagaaaaggt gaaattaatg taataataga ttttactgaa gcccagcatg tccacacctc atcattttag 18660 18720 ggtgttattg gtgggagcat cactcacagg acatttgaca ttttttgagc tttgtctgcg 18780 ggatcccgtg tgtaggtccc gtgcgtggcc atctcggcct ggacctgctg ggcttcccat 18840 ggccatggct gttgtaccag atggtgcagg tccgggatga ggtcgccagg ccctcagtga 18900 gctggatgtg cagtgtccgg atggtgcacg tctgggatga ggtcgccagg ccctgctgtg agctggatgt gtggtgtctg gatggtgcag gtcaggggtg aggtctccag gccctcggtg 18960 19020 agctggaggt atggagtccg gatgatgcag gtccggggtg aggtcgccag gccctgctgt 19080 gagctggatg tgtggtgtct ggatggtgca ggtcaggggt gaggtctcca ggccctcggt aagctggagg tatggagtcc ggatgatgca ggtccggggt gaggtcgcca ggccctgctg 19140 19200 tgagctggat gtgtggtgtc tggatggtgc aggtctgggg tgaggtcacc aggccctgcg 19260 gtgagctggg tgtgcggtgt ctggatggtg caggtctgga gtgaggtcgc cagacggtgc 19320 cagaccatgc ggtgagctgg atatgcggtg tccggatggt gcaggtctgg ggtgaggttg 19380 ccaggccctg ctgtgagttg gatgtggggt gtccggatgc tgcaggtccg gtgtgaggtc 19440 accaggccct gctgtgagct ggatgtgtgg tgtctggatg gtgcaggtct ggggtgaagg 19500 tcgccaggcc cctgcttgtg agctggatgt gtggtgtctg gatggtgcag gtctggagtg

19740 gaggtcgcca gaccctgctg tgagctggat gtgcggtgtc tggatggtac aggtctggag 19800 tgaggtcgcc agaccctgct gtgagctgga tatgcggtgt ccggatggtg caggtcaggg 19860 gtgaggtctc caggccctcg gtgagctgga ggtatggagt ccggatgatg caggtccggg 19920 gtgaggtcgc caggccctgc tgtgaactgg atgtgcggcg tctggatggt gcaggtctgg ggtgtggtcg ccaggccctc ggtgagctgg aggtatggag tccggatgat gcaggtccgg 19980 20040 ggtgaggtcg ccaggccctg ctgtgagctg gatgtgcggc gtctggatgg tgcaggtctg 20100 gggtgtggtc gccaggccct cggtgagctg gaggtatgga gtccggatga tgcaggtccg 20160 gggtgaggtt gccaggccct gctgtgagct ggatgtgctg tatccggatg gtgcagtccg 20220 gggtgaggtc gccaggccct gctgtgagct ggatgtgctg tatccggatg gtgcaggtct 20280 ggggtgaggt caccaggccc tgcggtgagc tggttgtgcg gtgtccggtt gctgcaggtc 20340 cggggtgagt tcgccaggcc ctcggtgagc tggatgtgcg gtgtccccgt gtccggatgg tgcaggtcca gggtgaggtc gctaggccct tggtgggctg gatgtgccgt gtccggatgg 20400 20460 tgcaggtctg gggtgaggtc gccaggcctt tggtgagctg gatgtgcggt gtctgcatgg 20520 tgcaggtctg gggtgaggtc gccaggccct tggtgggctg gatgtgtggt gtccggatgg 20580 tgcaggtccg gcgtgaggtc gccaggccct gctgtgagct ggatgtgcgg tgtctggatg 20640 gtgcaggtcc ggggtgaggt agccaaggcc ttcggtgagc tggatgtggg gtgtccggat 20700 ggtgcaggtc cggggtgagg tcgccaggcc ctgcggttag ctggatatgc ggtgtccgga tggtgcaggt ccggggtgag gtcaccaggc cctgcggtta gctggatgtg cggtgtctgg 20760 20820 atggtgcagg tccggggtga ggtcgccagg ccctgctgtg agctggatgt gctgtatccg 20880 gatggtgcag gtccggggtg aggtcgccag gccctgcagt gagctggatg tgctgtatcc ggatggtgca ggtctggcgt gaggtcgcca ggccctgcgg ttagctggat atgcggtgtc 20940 21000 ggatggtgca ggtccggggt gaggtcacca ggccctgcgg ttagctggat gtgcggtgtc 21060 cggatggtgc aggtctgggg tgaggtcgcc aggccctgct gtgagctgga tgtgctgtat ccggatggtg caggtccggg gtgaggtcgc caggccctgc ggtgagctgg atgtgctgta 21120 21180 tccggatggt gcaggtctgg cgtgaggtcg ccaggccctg cggtgagctg gatgtgcagt 21240 gtacggatgg tgcaggtccg gggtgaggtc gccaggccct gcggtgggct gtatgtgtgt 21300 tgtctggatg gtgcaggtcc ggggtgagtt cgccaggccc tgcggtgagc tggatgtgtg gtgtctggat gctgcaggtc cggggtgagt tcgccaggcc ctcggtgagc tggatatgcg 21360

gcgtgaggag	atcctggcca	agttcctgca	ctggctgatg	agtgtgtacg	tcgtcgagct	21660
gctcaggtct	ttcttttatg	tcacggagac	cacgtttcaa	aagaacaggc	tctttttcta	21720
ccggaagagt	gtctggagca	agttgcaaag	cattggaatc	aggtactgta	tcccacgcc	21780
aggcctctgc	ttctcgaagt	cctggaacac	cagcccggcc	tcagcatgcg	cctgtctcca	21840
cttgcctgtg	cttccctggc	tgtgcagctc	tgggctggga	gccaggggcc	ccgtcacagg	21900
cctggtccaa	gtggattctg	tgcaaggctc	tgactgcctg	gagctcacgt	tctcttactt	21960
gtaaaatcag	gagtttgtgc	caagtggtct	ctagggtttg	taaagcagaa	gggatttaaa	22020
ttagatggaa	acactaccac	tagcctcctt	gcctttccct	gggatgtggg	tctgattctc	22080
tctctctttt	ttttttcttt	tttgagatgg	agtctcactc	tgttgcccag	gctggagtgc	22140
agtggcataa	tcttggctca	ctgcaacctc	cacctcctgg	gtttaagcga	ttcaccagcc	22200
tcagcctcct	aagtagctgg	gattacaggc	acctgccacc	acgcctggct	aatttttgta	22260
cttttaggag	agacggggtt	tcaccatgtt	ggccaggctg	gtctcgaact	catgacctca	22320
ggtgatccac	ccaccttggc	ctcccaaagt	gctgggttta	caggctaagc	caccgtgccc	22380
agcccccgat	tctcttttaa	ttcatgctgt	tctgtatgaa	tcttcaatct	attggattta	22440
ggtcatgaga	ggataaaatc	ccacccactt	ggcgactcac	tgcagggagc	acctgtgcag	22500
ggagcacctg	gggataggag	agttccacca	tgagctaact	tctaggtggc	tgcatttgaa	22560
tggctgtgag	attttgtctg	caatgttcgg	ctgatgagag	tgtgagattg	tgacagattc	22620
aagctggatt	tgcatcagtg	agggacggga	gcgctggtct	gggagatgcc	agcctggctg	22680
agcccaggcc	atggtattag	cttctccgtg	tcccgcccag	gctgactgtg	gagggcttta	22740
gtcagaagat	cagggcttcc	ccagctcccc	tgcacactcg	agtccctggg	gggccttgtg	22800
acaccccatg	ccccaaatca	ggatgtctgc	agagggagct	ggcagcagac	ctcgtcagag	22860
gtaacacagc	ctctgggctg	gggaccccga	cgtggtgctg	gggccatttc	cttgcatctg	22920
ggggagggtc	agggctttcc	ctgtgggaac	aagttaatac	acaatgcacc	ttacttagac	22980
tttacacgta	tttaatggtg	tgcgacccaa	catggtcatt	tgaccagtat	tttggaaaga	23040
atttaattgg	ggtgaccgga	aggagcagac	agacgtggtg	gtccccaaga	tgctccttgt	23100
cactactggg	actgttgttc	tgcctggggg	gccttggagg	cccctcctcc	ctggacaggg	23160
taccgtgcct	tttctactct	gctgggcctg	cggcctgcgg	tcagggcacc	agctccggag	23220
cacccgcggc	cccagtgtcc	acggagtgcc	aggctgtcag	ccacagatgc	ccaggtccag	23280
gtgtggccgc	tccagccccc	gtgcccccat	gggtggtttt	gggggaaaag	gccaagggca	23340
gaggtgtcag	gagactggtg	ggctcatgag	agctgattct	gctccttggc	tgagctgccc	23400
tgagcagcct	ctcccgccct	ctccatctga	agggatgtgg	ctctttctac	ctgggggtcc	23460
tgcctggggc	cagccttggg	ctaccccagt	ggctgtacca Page	gagggacagg 48	catcctgtgt	23520
			raye	10		

23580 ggaggggcat gggttcacgt ggccccagat gcagcctggg accaggctcc ctggtgctga 23640 tggtgggaca gtcaccctgg gggttgaccg ccggactggg cgtccccagg gttgactata 23700 ggaccaggtg tccaggtgcc ctgcaagtag aggggctctc agaggcgtct ggctggcatg 23760 ggtggacgtg gccccgggca tggccttcag cgtgtgctgc cgtgggtgcc ctgagccctc actgagtcgg tgggggcttg tggcttcccg tgagcttccc cctagtctgt tgtctggctg 23820 23880 agcaagcctc ctgaggggct ctctattgca gacagcactt gaagagggtg cagctgcggg 23940 agctgtcgga agcagaggtc aggcagcatc gggaagccag gcccgccctg ctgacgtcca 24000 gactccgctt catccccaag cctgacgggc tgcggccgat tgtgaacatg gactacgtcg 24060 tgggagccag aacgttccgc agagaaaaga gggtggctgt gctttggttt aacttccttt 24120 ttaaacagaa gtgcgtttga gccccacatt tggtatcagc ttagatgaag ggcccggagg 24180 aggggccacg ggacacagcc agggccatgg cacggcgcca acccatttgt gcgcacagtg 24240 aggtggccga ggtgccggtg cctccagaaa agcagcgtgg gggtgtaggg ggagctcctg 24300 gggcagggac aggctctgag gaccacaaga agcagccggg ccagggcctg gatgcagcac 24360 ggcccgaggt cctggatccg tgtcctgctg tggtgcgcag cctccgtgcg cttccgctta 24420 cggggcccgg ggaccaggcc acgactgcca ggagcccacc gggctctgag gatcctggac 24480 cttgccccac ggctcctgca ccccacccct gtggctgcgg tggctgcggt gaccccgtca 24540 tctgaggaga gtgtgggtg aggtggacag aggtgtggca tgaggatccc gtgtgcaaca 24600 cacatgcggc caggaacccg tttcaaacag ggtctgagga agctgggagg ggttctaggt cccgggtctg ggtggctggg gacactgggg aggggctgct tctcccctgg gtccctatgg 24660 tggggtgggc acttggccgg atccactttc ctgactgtct cccatgctgt ccccgccagg 24720 ccgagcgtct cacctcgagg gtgaaggcac tgttcagcgt gctcaactac gagcgggcgc 24780 24840 ggcgccccgg cctcctgggc gcctctgtgc tgggcctgga cgatatccac agggcctggc gcaccttcgt gctgcgtgtg cgggcccagg acccgccgcc tgagctgtac tttgtcaagg 24900 24960 tgggtgccgg ggacccccgt gagcagccct gctggacctt gggagtggct gcctgattgg 25020 cacctcatgt tgggtggagg aggtactcct gggtgggccg cagggagtgc aggtgaccct 25080 gtcactgttg aggacacacc tggcacctag ggtggaggcc ttcagccttt cctgcagcac 25140 atggggccga ctgtgcaccc tgactgcccg ggctcctatt cccaaggagg gtcccactgg 25200 attccagttt ccgtcagaga aggaaccgca acggctcagc caccaggccc cggtgccttg 25260 caccccagtc ctgagccagg ggtctcctgt cctgaggctc agagagggga cacagcccgc 25320 cctgcccttg gggtctggag tggtgggggt cagagagaga gtgggggaca ccgccaggcc 25380 aggccctgag ggcagaggtg atgtctgagt ttctgcgtgg ccactgtcag tctcctcgcc

```
ggaggtcatc gccagcatca tcaaacccca gaacacgtac tgcgtgcgtc ggtatgccgt 25500
 ggtccagaag gccgcccatg ggcacgtccg caaggccttc aagagccacg taaggttcac
 gtgtgatagt cgtgtccagg atgtgtgtct ctgggatatg aatgtgtcta gaatgcagtc
                                                                    25620
 gtgtctgtga tgcgtttctg tggtggaggt acttccatga tttacacatc tgtgatatgc
                                                                    25680
gtgtgtggca cgtgtgtgtc gtggtgcatg tatctgtggc gtgcatattt gtggtgtgt
                                                                    25740
 tgtgtgtggc acgtgtgtgt ccatggtgtg tgtgcctgtg gtgtgcatgt gtgtgtgtct
                                                                    25800
gtgacacgtg catgttcatg ctgtgtgctg catgtctgtg atgtgcctat ttgtggtgtg
                                                                    25860
tgtgtgcatg tgtccgtgac atatgcgtgt ctatggcatg ggtgtgtgtg gccccttggc
                                                                    25920
cttactcctt cctcctccag gcatggtccg caccattgtc ctcacgctct cgggtgctgg
                                                                    25980
tttggggagc tccacattca gggtcctcac ttctagcatg ggtgcccctg tcctgtcaca
                                                                    26040
gggctgggcc ttggagactg taagccaggt ttgagaggag agtagggatg ctggtggtac
                                                                    26100
cttcctggac ccctggcacc cccaggaccc cagtctggcc tatgccggct ccatgagata
                                                                    26160
taggaaggct gattcaggcc tcgctcccg ggacacactc ctcccagagc ggccgggggc
                                                                    26220
cttggggctc ggcaggggtg aaaggggccc tgggcttggg ttcccaccca gtggtcatga
                                                                    26280
gcacgctgga ggggtaagcc ctcaaagtcg tgccaggccg gggtgcagag gtgaagaagt
                                                                    26340
atccctggag cttcggtctg gggagaggca catgtggaaa cccacaagga cctctttctc
                                                                    26400
tgacttcttg agct
                                                                    26414
<210>
       44
       25138
<212>
       DNA
<213>
       Homo sapiens
<220>
<221>
       misc_feature
<222>
       (1)..(25138)
       n is a, c, g, or t.
<400> 44
tgtgggattg gttttcatgt gtgggatagg tggggatctg tgggattggt ttttatgagt
                                                                       60
ggggtaacac agagttcaag gcgagctttc ttcctgtagt gggtctgcag gtgctccaac
                                                                      120
agctttattg aggagaccat atcttccttt gaactatggt cgggtttata gtaagtcagg
                                                                      180
ggtgtggagg cctccctgg gctccctgtt ctgtttcttc cactctgggg tcgtgtggtg
                                                                      240
cctgctgtgg tgtgtggccg gtgggcaggg cttccaggcc tccttgtgtt cattggcctg
                                                                      300
gatgtggccc tggctacgct ccgtccttgg aattcccctg cgagttggag gctttctttc
                                                                      360
tttcttttt tctttctttt ttttttttt tgataacaga gtctcgctct tttttgccca
                                                                      420
ggctggagtg gtttggcgtg atcttggctc actgcaacct gtgcttcctg agttcaagca
                                                                      480
```

attctcttgc cto	cagcctcc ca	agtagctg	gaattatagg	cgcccaccac	catgctgact	540
aatttttgta att	tttagtag ag	jacgaggtt	tctccatgtt	ggccaggctg	gtctcgaact	600
cctgacctca gg	tgatcctc co	acctcggc	ctcccaaagt	gctgggatga	caggtgtgaa	660
ccgccgcgcc cgg	gccgagac to	gcttcctg	cagcttccgt	gagatctgca	gcgatagctg	720
cctgcagcct tgg	gtgctgac aa	cctccgtt	ttccttctcc	aggtctcgct	aggggtcttt	780
ccatttcatg act	tctcttca ca	ıgaagagtt	tcacgtgtgc	tgatttcccg	gctgtttcct	840
gcgtaattgg tg	tctgctgt tt	atcgatgg	cctccttcca	tttcctttag	gctttgttta	900
ttgttgtttt tco	cggctcct tg	jaaggaaaa	gtttcgatta	tggatgtttg	aactttcttt	960
tctaaacaag ca	tctgaagt tg	ccgttttc	cctctaaagc	agggatcccg	aggcccctgg	1020
ctgtggagtg gca	accggtct gg	ggcctgtt	aggaacccgg	cgcacagcgg	gaggctaggt	1080
ggggtgtggg gag	gccagcgt to	ccgcctga	gccccgcccc	tctcagatca	gcagtggcat	1140
gcggtgctca gag	ggcgcaca ca	ccctactg	agaactgtgc	gtgagagggg	tctagattct	1200
gtgctcctta tgg	ggaatcta at	gcctgatg	atctgaggtg	gaaccgtttg	ctcccaaaac	1260
catccccttc ccc	cactgctg to	ctgtggaa	aaatcgtctt	ccacgaaacc	agtccctggt	1320
accacaatgg ttg	gggaccc tg	tgctaaag	acctgcttca	gcagcctctc	gtcagtgttg	1380
atatattggc tti	ttctgtgt tg	agtccaga	ataattacgg	atttctgtga	tgctttccgc	1440
cgacctcaga cco	atgggct at	ttgtgggc	gtgttgcctg	ctcctgggtt	gggaagggtg	1500
caggccccat gta	accttcct gt	tactgcct	tccaggttgg	ttctcagggt	tgaatcgtac	1560
tcgatgtggt ttt	agcccac gg	ccctgccg	ccagctcctg	ggggctgggg	aacatgctga	1620
agcacagagt cad	ccgtgcgc gt	cttttgat	gcctcacaag	ctcgaggcct	cctgtgtccg	1680
tgttagtgtg tgt	cacgtgc ct	gctcacat	cctgtcttgg	ggacgcaggg	gcttagcagg	1740
tcccgtagta aat	gacaagc gt	cctggggg	agtctgcaga	ataggaggtg	ggggtgccgg	1800
tctctctccc gcg	gtcttcag ac	tcttctcc	tgcctgtgct	gtggctgcac	ctgcatccct	1860
gcaatccctc cag	gcactggg ct	ggagaggc	ccgggagctc	gagtgccact	tgtgccacgt	1920
gactgtggat ggd	agtcggt ca	cgggggtc	tgatgtgtgg	tgactgtgga	tggcggttgg	1980
tcacaggggt ctg	gatgtgtg gt	gactgtgg	atggcggtcg	tggggtctga	tgtggtgact	2040
gtggatggcg gtd	gtggggt ct	gatgtgtg	gtgactgtgg	atggcggtcg	tggggtctga	2100
tgtggtgact gtg	gatggcg gt	cgtggggt	ctgatgtggt	gactgtggat	ggcggtcgtg	2160
gggtctgatg tgg	gtgactgt gg	atggcagt	cgtggggtct	gatgtgtggt	gactgtggat	2220
ggcggtcgtg ggg	tctgatg tg	gtgactgt	ggatggcagt	cgtggggtct	gatgtgtggt	2280
gactgtggat ggd	ggtcgtg gg	gtctgatg	tgtggtgact	gtggatggcg	gtcgtggggt	2340
ctgatgtgtg gtg	actgtgg at	ggcggtcg	tggggtctga	tgtgtggtga	ctgtggatgg	2400

cggtcgtggg gtctgatgt	gtgactgtgg	atggcggtcg	tggggtctga	tgtgtggtga	2460
ctgtggatgg tgatcggtca	caggggtctg	atgtgtggtg	actgtggatg	gcggtcgtgg	2520
ggtctgatgt gtggtgact					2580
gtggatggcg gtcgtgggg					2640
tctgatgtgt ggtgactgt					2700
ggatggcggt cgtggggtc					2760
tgtggtgact gtggatggc	-				2820
gggtctgatg tggtgactg					2880
ggcggttggt cccgggggt					2940
gtggtgactg tggatggca					3000
ggggtctgat gtgtggtga					3060
gatggcggtc gtggggtct					3120
ggtgactgtg gatggcggt	gtggggtctg	atgtgtggtg	actgtggatg	gtgatcggtc	3180
acaggggtct gatgtgtgg	t gactgtggat	ggcggtcgtg	gggtctgatg	tgtggtgact	3240
gtggatggcg gtcgtgggg	t ctgatgtggt	gactgtggat	ggcggtcgtg	gggtctgatg	3300
tgtggtgact gtggatggc	gtcgtagggt	ctgatgtgtg	gtgactgtgg	atggcagtcg	3360
gtcacagggg tctgatgtg	ggtgactgtg	gatggcggtc	gtggggtctg	atgtgtggtg	3420
actgtggatg gcggtcgtg	ggtctgatgt	gtggtgactg	tggatggcgg	tcgtggggtc	3480
tgatgtgtgg tgactgtgg	tggcggtcgt	ggggtctgat	gtggtgactg	tggatggtga	3540
tcggtcacag gggtctgat	g tgtggtagct	gcaggtggag	tcccaggtgt	gtctgtagct	3600
actttgcgtc ctcggcccc	cggcccccgt	ttcccaaaca	gaagcttccc	aggcgctctc	3660
tgggcttcat cccgccatc	g ggcttggccg	caggtccaca	cgtcctgatc	ggaagaaaca	3720
agtgcccagc tctggccgg	g gcaggccaca	tttgtggctc	atgccctctc	ctctgccggc	3780
aggtctctac cttgacaga	ctccagccgt	acatgcgaca	gttcgtggct	cacctgcagg	3840
agaccagccc gctgaggga	t gccgtcgtca	tcgagcaggt	ctgggcactg	ccctgcaggg	3900
ttgggcacgg actcccagc	a gtgggtcctc	ccctgggcaa	tcactgggct	catgaccgga	3960
cagactgttg gccctgggg	g gcagtggggg	gaatgagctg	tgatgggggc	atgatgagct	4020
gtgtgccttg gcgaaatct	g agctgggcca	tgccaggctg	cgacagctgc	tgcattcagg	4080
cacctgctca cgtttgact	g cgcggcctct	ctccagttcc	gcagtgcctt	tgttcatgat	4140
ttgctaaatg tcttctctg	cagttttgat	cttgaggcca	aaggaaaggt	gtcccctcc	4200
tttaggaggg caggccatg	t ttgagccgtg	tcctgcccag	ctggcccctc	agtgctgggt	4260
ctgaggccaa aggaaacgt	tccccttct	taggaggacg	ggccgtgttt	gagccacgcc	4320

ccgctgagcg	ggcctctcag	tgctgggtct	gtccacgtgg	ccctgtggcc	ctttgcagat	4380
gtggtctgtc	cacgtggccc	tgtggctctt	tgcagatgcc	tgttagcact	tgctcggctc	4440
taggggacag	tcgtgtccac	cgcatgaggc	tcagagacct	ctgggcgaat	ttccttggct	4500
cccagggtgg	gggtggaggt	ggcctgggct	gctgggaccc	agaccctgtg	cccggcagct	4560
gggcagcaac	tcctggatca	catatgccat	ccgggccacg	gtgggctgtg	tgggtgtgag	4620
cccagctgga	cccacaggtg	gcccagagga	gacgttctgt	gtcacacact	ctgcctaagc	4680
ccatgtgtgt	ctgcagagac	tcggcccggc	cagcccacga	tggccctgca	ttccagccca	4740
gccccgcact	tcatcacaaa	cactgacccc	aaaagggacg	gagggtcttg	gccacgtggt	4800
cctgcctgtc	tcagcaccca	ccggctcact	cccatgtgtc	tcccgtctgc	tttcgcagag	4860
ctcctccctg	aatgaggcca	gcagtggcct	cttcgacgtc	ttcctacgct	tcatgtgcca	4920
ccacgccgtg	cgcatcaggg	gcaagtgagt	caggtggcca	ggtgccattg	ccctgcgggt	4980
ggctgggcgg	gctggcaggg	cttctgctca	cctctctcct	gccccttccc	cactgncctt	5040
ctgcccgggg	ccaccagagt	ctccttttct	ggcccccgcc	ccctccggct	cctgggctgc	5100
aggctcccga	ggccccggaa	acatggctcg	gcttgcggca	gccggagcgg	agcaggtgcc	5160
acacgaggcc	tggaaatggc	aagcggggtg	tggagttgct	cctgcgtgga	ggacgagggg	5220
cggggggtgt	gtctgggtca	ggtgtgcgcc	gagcgtttga	gcctgcagct	tgtcagctcc	5280
aagttactac	tgacgctgga	cacccggctc	tcacacgctt	gtatctctct	ctcccgatac	5340
aaaaggattt	tatccgattc	tcattcctgt	ccctgtcgtg	tgacccccgc	gagggcgcgg	5400
gctcttctct	ctgtgactag	atttcccatc	tggaaagtgc	ggggttgacc	gtgtagtttg	5460
ctcctctcgg	ggggcctgtg	gtggccatgg	ggcaggcggc	ctgggagagc	tgccgtcaca	5520
cagccactgg	gtgagccaca	ctcacggtgg	tagagccaca	gtgcctggtg	ccacatcacg	5580
tcctctggat	tttaagtaaa	accacacacc	tcccggcagg	catctgcctg	cgaccctgtg	5640
tgtgcctggg	gagagtggta	gcacggagga	aattcgtgca	cactcaaggt	catcagcaag	5700
gtcatccgca	gtcaggtgga	acgtggaggc	ctctctctgg	gatcgtctcc	agcggataaa	5760
ggactgtgca	cagcttcgga	agcttttatt	taaaaatata	actattaatt	attgcattat	5820
aagtaatcac	taatggtatc	agcaattata	atatttatta	aagtataatt	agaaatatta	5880
agtagtacac	acgttctgga	aaaacacaaa	ttgcacatgg	cagcagagtg	aattttggcc	5940
gagggacacg	tgtgcacatg	tgtgtaagcg	gcccccaggc	ccacagaatt	cgctgacaaa	6000
gtcacctccc	cagagaagcc	accacgggcc	tccttcgtgg	tcgtgaattt	tattaagatg	6060
gatcaagtca	cgtaccgtcc	acgtgtggca	gggctttggg	gaatgtgagg	tgatgactgc	6120
gtcctcatgc	cctgacagac	aggaggtgac	tgtgtctgtc	ctgtccctag	gacacggaca	6180
ggcccgaagc	tctagtcccc	atcgtggtcc	agtttggcct	ctgaataaaa	acgtcttcaa	6240

aacctgttgc	cccaaaaact	aagaacagag	agagtttccc	atcccatgtg	ctcacagggg	6300
cgtatctgct	tgcgttgact	cgctgggctg	gccggactcc	tagagttggt	gcgtgtgctt	6360
ctgtgcaaaa	agtgcagtcc	tcttgcccat	cactgtgata	tctgcaccag	caaggaaagc	6420
ctcttttctt	ttctttcttt	tttttttt	gagacggaac	gtcactgttg	tctgcctggg	6480
cttgagtgca	gtggcgcgat	ctcaactcac	tgcaacctcc	gcctcccggg	ttccagcatt	6540
tctcctgcct	cagcctcccg	agcagctgag	attacaggca	cccaccccct	gcgcctggct	6600
aatttttgta	tttttagtag	agaggggttt	ttgccatgtt	ggccaggctg	gtctcgaact	6660
cctgacctca	ggtgatccac	ccacctcggc	ctcccaaagt	gctgggatta	caggtgtgag	6720
ccatcacgcc	cagccggaaa	gcctcttttt	aaggtgacca	cctatagcgc	ttcccgaaaa	6780
taacaggtct	tgtttttgca	gtaggctgca	agcgtctctt	agcaacagga	gtggcgtcct	6840
gtgggctctg	gggatggctg	agggtcgcgt	ggcagccatg	ccttctgtgt	gcacctttag	6900
gttccacggg	gctattctgc	tctcactgtt	tgtctgaaaa	cgcacccttg	gcatccttgt	6960
ttggagagtt	tctgcttctc	gttggtcatg	ctgaaactag	gggcaaggtt	gtatccgttg	7020
gcgcgcagcg	gctacatgta	gggtcatgag	tctttcaccg	tggacaaatt	ccttgaaaaa	7080
aaaaaagga	gtccggttaa	gcattcattc	cgggtcaagt	gtctggttct	gtgaataaac	7140
tctaagattt	aagaaacctt	aatgaaagaa	aaccttgatg	attcagagca	aggatgtggt	7200
cacacctgtg	gctggatctg	tttcagccgc	cccagtgcat	ggtgagagtg	gggagcaggg	7260
attgtttgtt	cagaggtctc	atctggtatg	tttctgaggt	gtttgccggc	tgaatggtag	7320
acgtgtcgtt	tgtgtgtatg	aggttctgtg	tctgtgtgtg	gctcggtttg	agtgtacgca	7380
tgtccagcac	atgccctgcc	cgtctctcac	ctgtgtcttc	ccgccccagg	tcctacgtcc	7440
agtgccaggg	gatcccgcag	ggctccatcc	tctccacgct	gctctgcagc	ctgtgctacg	7500
gcgacatgga	gaacaagctg	tttgcgggga	ttcggcggga	cgggtgaggc	ctcctcttcc	7560
ccaggggggc	ttgggtgggg	gttgatttgc	ttttgatgca	ttcagtgtta	atattcctgg	7620
tgctctggag	accatgactg	ctctgtcttg	aggaaccaga	caaggttgca	gccccttctt	7680
ggtatgaagc	cgcacgggag	gggttgcaca	gcctgaggac	tgcgggctcc	acgcaggctc	7740
tgtccagcgg	ccatgtccag	aggcctcagg	gctcagcagg	cgggagggcc	gctgccctgc	7800
atgatgagca	tgtgaattca	acaccgagga	agcacaccag	cttctgtcac	gtcacccagg	7860
ttccgttagg	gtccttgggg	agatggggct	ggtgcagcct	gaggccccac	atctcccagc	7920
aggccctcga	caggtggcct	ggactgggcg	cctcttcagc	ccattgccca	tcccacttgc	7980
atggggtcta	cacccaagga	cgcacacacc	taaatatcgt	gccaacctaa	tgtggttcaa	8040
ctcagctggc	ttttattgac	agcagttact	tttttttt	taatacttta	agttctaggg	8100
tacatgtgca	cgacgtgcag	gttagttaca	tatgtataca	tgtgccatgt	tggtgtgctg	8160

cacccattaa	ctcatcattt	acattaggta	tatctcctaa	tgctatccct	ccccactccc	8220
cccatcccat	gacaggccct	ggtgtgtgat	gttccccacc	ctgtgtccaa	gtgttctcat	8280
tgttcagttc	ccacctgtga	gtgagaacat	gtggtgtttg	gttttctttc	cttgcaatag	8340
tttgctcaga	gtgatggttt	ccagcttcgt	ccatgtccct	acaaaggaca	tgaactcatc	8400
cttttttatg	actgcatagt	attccgtggt	gtatatgtgc	cacattttct	taatccagtc	8460
tatcatcgat	ggacatttgg	gttggttgca	agtctttgct	actgtgaata	gtgccgcaat	8520
aaacatacgt	gtgcatgtgt	ctttatagca	gcatgattta	taatcctttg	ggtatatacc	8580
cagtaatggg	atggctgggt	caaatggtat	ttctagttct	agatccttga	ggaatcacca	8640
cactgtcttc	cacaatggtt	gaactagttt	acactcccac	caacagtgta	aaagtgttct	8700
ggtgctggag	aggatgtgga	cagcagttat	ttttttatga	aaatagtatc	actgaacaag	8760
cagacagtta	gtgaaggatg	cgtcaggaag	cctgcaggcc	acacagccat	ttctctcgaa	8820
gactccgggt	ttttcctgtg	catcttttga	aactctagct	ccaattatag	catgtacagt	8880
ggatcaaggt	tcttcttcat	taaggttcaa	gttctagatt	gaaataagtt	tatgtaacag	8940
aaacaaaaat	ttcttgtaca	cacaacttgc	tctgggattt	ggaggaaagt	gtcctcgagc	9000
tggcggcaca	ctggtcagcc	ctctgggaca	ggatacctct	ggcccatggt	catggggcgc	9060
tgggcttggg	cctgagggtc	acacagtgca	ccatgcccag	cttcctgtgg	ataggatctg	9120
ggtctcggat	catgctgagg	accacagctg	ccatgctggt	aaagggcacc	acgtggctca	9180
gagggggcga	ggttcccagc	cccagctttc	ttaccgtctt	cagttattt	tccctaagag	9240
tctgagaagt	ggggccgcgc	ctgatggcct	tcgttcgtct	tcagctggca	cagaattgca	9300
caagctgatg	gtaaacactg	agtacttata	atgaatgagg	aattgctgta	gcagttaact	9360
gtagagagct	cgtctgttgg	aaagaaattt	aagtttttca	tttaaccgct	ttggagaatg	9420
ttactttatt	tatggctgtg	taaattgttt	gacattcagt	ccctcgtaga	cagatactac	9480
gtaaaaagtg	taaagttaac	cttgctgtgt	attttccctt	attttaggct	gctcctgcgt	9540
ttggtggatg	atttcttgtt	ggtgacacct	cacctcaccc	acgcgaaaac	cttcctcagg	9600
tgaggcccgt	gccgtgtgtc	tgtggggacc	tccacagcct	gtgggctttg	cagttgagcc	9660
ccccgtgtcc	tgcccctggc	accgcagcgt	tgtctctgcc	aagtcctctc	tctctgccgg	9720
tgctggatcc	gcaagagcag	aggcgcttgg	ccgtgcaccc	aggcctgggg	gcgcaggggc	9780
accttcggga	gggagtgggt	accgtgcagg	ccctggtcct	gcagagacgc	acccaggtta	9840
cacacgtggt	gagtgcaggc	ggtgacctgg	ctcctgctgc	tctttggaaa	gtcaagagtg	9900
gcggctcctg	gggccccagt	gagaccccca	ggagctgtgc	acagggcctg	cagggccgag	9960
gcggcagcct	cctccccagg	gtgcacctga	gcctgcggag	agcaggagct	gctgagtgag	10020
ctggcccaca	gcgttcgctg	cggtcacgtt	cctgcgtggg	gttgtttggg	atcggtggga	10080

gaatttgga	t ttgctgagtg	ctgctgtctt	gaaccacgga	a gatggctagg	agtgggtttc	10140
agagttgat	t tttgtgaato	aaactaaaat	caggcacagg	ggacctggc	tcagcacagg	10200
ggattgtcc	a atgtggtcco	cctcaagggc	gccccacaga	gccggtggg	ttgttttaaa	10260
gtgcgattt	g acgagggacg	g agaaaccttg	aaagctgtaa	agggaaccct	cagaaaatgt	10320
ggccgccag	g ggtggtttca	ggtgctttgc	tgggctgtgt	ttgtgaaaac	ccatttggac	10380
ccgccctcc	a agtccaccct	ccaggtccac	cctccagggc	cgccctgggc	tgggggtatg	10440
cctggcgtt	c cttgtgccgc	agcccggagc	acagcaggct	gtgcacattt	aaatccacta	10500
agattcact	c ggggggagco	caggtcccaa	gcaactgagg	gctcaggagt	cctgaggctg	10560
ctgagggga	c agagcagacg	gggaacgctg	cttctgtgtg	gcaagttcct	gagggtgctg	10620
gccagggag	g tggctcagag	tgtatgttgg	ggtcccaccg	ggggcagaac	tctgtctctg	10680
atgagtcgg	c agccatgtaa	caggaagggg	tggccacagg	gagctgggaa	tgcaccaggg	10740
gagctgcgca	a gctggccgag	gtcccagggc	caggccacag	gaagggcagg	gggacgcccg	10800
gggccacago	agaggccgca	ggaagggaag	gggatgccca	ggccagagca	gaggctaccg	10860
ggcacagggg	g ggctccctga	gctgggtgag	cgaggctcat	gactcggcga	gggaacctcc	10920
ttgacgtgaa	a gctgacgact	ggtgttgccc	agctcacagc	ccagccaggt	cccgcgcctg	10980
agcaggaact	cagaaccctc	ccctttgtct	aaagcacagc	agatgccttc	agggcatcta	11040
ggagaaaaca	ggcaaagtcg	ttgagaaacg	tcttaaaaga	aggtgggatg	gtggcaattt	11100
cttgtccaga	ttttagtctg	ccccggacca	cagatgagtc	tataacggga	ttgtggtgtt	11160
gccatgggga	cacatgagat	ggaccatcac	agaggccact	ggggctgcac	ctcccatctg	11220
agtcctggct	gtcccgggtc	caggccaggt	tcttgcatgc	tcacctacct	gtcctgcccg	11280
ggagacaggg	aaagcacccc	gaagtctgga	gcagggctgg	gtccaggctc	ctcagagctc	11340
ctgccaggcc	cagcaccctg	ctccaaatca	ccacttctct	ggggtttcc	aaagcattta	11400
acaagggtgt	caggttacct	cctgggtgac	ggccccgcat	cctggggctg	acattgcccc	11460
tctgccttag	gaccctggtc	cgaggtgtcc	ctgagtatgg	ctgcgtggtg	aacttgcgga	11520
agacagtggt	gaacttccct	gtagaagacg	aggccctggg	tggcacggct	tttgttcaga	11580
tgccggccca	cggcctattc	ccctggtgcg	gcctgctgct	ggatacccgg	accctggagg	11640
tgcagagcga	ctactccagg	tgagcgcacc	tggccggaag	tggagcctgt	gcccggctgg	11700
ggcaggtgct	gctgcagggc	cgttgcgtcc	acctctgctt	ccgtgtgggg	caggcgactg	11760
ccaatcccaa	agggtcagag	gccacagggt	gcccctcgtc	ccatctgggg	ctgagcagaa	11820
atgcatcttt	ctgtgggagt	gagggtgctc	acaacgggag	cagttttctg	tgctattttg	11880
gtaaaaggaa	atggtgcacc	agacctgggt	gcactgaggt	gtcttcagaa	agcagtctgg	11940
atccgaaccc	aagacgcccg	ggccctgctg	ggcgtgagtc	tctcaaaccc	gaacacaggg	12000

gccctgctgg	gcatgagtcc	ctctgaaccc	gagaccctgg	ggccctgctg	ggcgtgagtc	12060
tctccgaacc	cagagacttc	agggcccttt	tgggcgtgag	tctctccgct	gtgagcccca	12120
cactccaagg	ctcatccaca	gtctacagga	tgccatgagt	tcatgatcac	gtgtgaccca	12180
tcaggggaca	gggccatggt	gtggggggg	tctctacaaa	attctggggt	cttgtttccc	12240
cagagcccga	gagctcaagg	ccccgtctca	ggctcagaca	caaatgaatt	gaagatggac	12300
acagatgcag	aaatctgtgc	tgtttctttt	atgaataaaa	agtatcaaca	ttccaggcag	12360
ggcaaggtgg	ctcacaccta	taatcccagc	actttgggag	gccgaggtgg	gtggatcact	12420
tgaggccagg	agtttgaggc	caacctaacc	aacatagtga	aattccattt	ctacttaaaa	12480
aatacaaaaa	ttagcctggc	ctggtggcac	acgcctgtag	tccccgctat	gcgggaggct	12540
gaggcaggag	aatcatttga	acccaggagg	cagaggttgc	agtgagccga	gatcacacca	12600
ctgcactcca	gcctgggcaa	cagagtgaga	cttcatctta	aaaaaaaaaa	aaaaagtatc	12660
agcattccaa	aaccatagtg	gacaggtgtt	tttttattct	gtccttcgat	aatatttact	12720
ggtgctgtgc	tagaggccgg	aactgggggt	gccttcctct	gaaaggcaca	ccttcatggg	12780
aagagaaata	agtggtgaat	ggttgttaaa	ccagaggttt	aaactggggt	cctgtcgttc	12840
tgagttaaca	gtccagatct	ggactttgcc	tctttccaga	atgctccctg	gggtttgctt	12900
catgggggag	cagcaggtgt	ggacaccctc	gtgatggggg	agcagcaggt	gcagacgccc	12960
tcatgatggg	ggagtggcag	gtgcagacac	ccttgtgcat	ggtgcccagc	atgtccctgt	13020
tgcagctccc	tcccacaag	gatgccggtc	tcctgtgctc	cccacagtcc	ctgcttccct	13080
ctcacagcct	tacctggtcc	tggcctccac	tggctttgtc	tgcatgattt	ccacatttcc	13140
tgggctccca	gcacctcttc	gcctctccca	ggcacctctg	cagtgctggc	cataccagtc	13200
agctgtgaac	tgtccactgc	ttattttgct	ccccatgaaa	tgtattttt	aggacaggca	13260
cccctggttc	cagcctctgg	cacagcatca	gtgaatgtta	ttgaaggaca	aaggacagac	13320
aaacaaatca	ggaaaatggg	ttctctctaa	acacattgca	aagccacaga	ggctagtgca	13380
ggatgggtgg	gcatcaggtc	atcagatgtg	ggtccaatgc	cagaatattc	tgtgctccca	13440
aaggccactt	ggtcagagtg	tgtgcttgca	gaggtggctc	taaaagctca	gcagtggagg	13500
cagtggttcg	ccatactcag	ggtgaactca	catcctctgt	gtctgaagta	tacagcagag	13560
gcttgaaggg	catctgggag	aagaaaacag	gcaaaatgat	taagaaaagt	gaaaaaggaa	13620
aagtggtaag	atgggaattt	tcttgtccag	attttagtct	cccaaaccac	agctcagatg	13680
gtagaatgtg	gtcagaactg	atggacagaa	caatagaaca	aaacggaagc	cctatctctc	13740
agaaacgtgt	gttaatgtgg	tatgtggcac	agctgatgga	aaagagagtg	tgtgtgtaat	13800
tttttttct	gagaaaactg	actggaagca	aataagttgt	gtctttacag	catataccag	13860
agcagattct	aggtagaaga	ggagacacat	gcaaacaaca	ccagcaacag	aaataaaaca	13920

aaagactcaa	agggaaggga	ggtgaacgtt	ccctggtttg	gtgttgggga	aggacacaca	13980
gggaggcgga	tgaaaccagt	gaggcaacgg	gcattgcttt	cactgcagag	aaactcagct	14040
tgcctgagcc	acagtgaaaa	tggccattcc	ctggagcgtt	tgtgcacgtg	atttatttaa	14100
ggcgccctgt	gaggtcctgc	acattcatcc	tctcactttg	ttctcctaac	cacctgagag	14160
gtagaggagg	aaaggctcca	ggggagcagc	cgcccttggt	cacccagctg	gcaaagggca	14220
tgcatgattg	cagcctggcc	tcctgctccg	gggcccttgc	tctgcccgag	gaccccacac	14280
aagtcagacc	cataggctca	gggtgagccg	gagcccaagg	tcgtgttggg	gatggctgtg	14340
aaagaagaaa	tggacgtctg	atgcacactt	gggaaggtcc	taccagcagc	gtcaaagaaa	14400
tgcatgtgaa	actgacagcg	agacccatcc	ctcaaagaaa	cgcacgtgaa	actgatggcg	14460
agacctgtcc	ccatccctca	tgctggctcc	ttttctgggc	ttgccaagag	ccagcatcag	14520
gttgaggcaa	gctggaaaga	cttttctgga	aagcagcttg	tttgcatgga	agtcctcaca	14580
atgtcctgtg	tcttcccagt	aattccactt	ctgaagtgac	cagacattat	cacgggtctt	14640
atttaccatt	tccagtgttc	caggcagggg	gacttgccac	agcaagtcac	gaacctgccc	14700
aaatacaggg	ctaaggagat	attatgcatc	acaaaacttg	ctctgccatt	aaacattttt	14760
caaagaattt	ttgaagaatg	tttaatggca	caaaacgttt	atttcaatgt	agcagtgttc	14820
aaagctggat	gtaaaagaac	acaccccagg	agcctgccgt	gaatgtcatg	tgtgttcatc	14880
tttggacatg	gacatacatg	ggcagtgagt	ggtggtgagg	ccctggagga	catcggtggg	14940
atgcctccat	cctgcccctc	tggagacacc	atgtgtgcca	cgtgcactca	ctggagccct	15000
gtttagctgg	tgccacctgg	ctcttccatc	cctgagattc	aaacacagtg	agattcccca	15060
cgcccaactc	agtgttctcc	cacaaaaaac	ctgagtcaca	cctgtgttca	ctcgagggac	15120
gcccgggagc	cagggctcca	cagtttatta	tgtgtttttg	gctgagttat	gtgcagatct	15180
catcagggca	gatgatgagt	gcacaaacac	ggccgtgcga	ggtttggata	cactcaacat	15240
cactagccag	gtcctggtgg	agtttggtca	tgcagagtct	ggatggcatg	tagcatttgg	15300
agtccatgga	gtgagcaccc	agccccctcg	ggctgcagcg	catgccccag	gcaggacaag	15360
gaagcgggag	gaaggcagga	ggctctttgg	agcaagcttt	gcaggagggg	gctgggtgtg	15420
gggcaggcac	ctgtgtctga	cattcccccc	tgtgtctcag	ctatgcccgg	acctccatca	15480
gagccagtct	caccttcaac	egeggettea	aggctgggag	gaacatgcgt	cgcaaactct	15540
ttggggtctt	gcggctgaag	tgtcacagcc	tgtttctgga	tttgcaggtg	agcaggctga	15600
tggtcagcac	agagttcaga	gttcaggagg	tgtgtgcgca	agtatgtgtg	tgtgtgtgtg	15660
cgcgcgtgcc	tgcaaggctg	atggtgactg	gctgcacgta	agagtgcaca	tgtacgcata	15720
tacacgtgag	cacatacatg	tgtgcatgtg	tgtacatgaa	ggcatggcag	tgtgtgcaca	15780
ggtgtgcaag	ggcacaagtg	tgtgcacatg	cgaatgcaca	cctgacatgc	atgtgtgttc	15840

gtgcacagtc	gtgtgggcat	tcacgtgagg	tgcatgcgtg	tgggtgtgca	gtgtgagtag	15900
catgtgtgca	cataacatgt	attgaggggt	cctcgtgttc	accccgctag	gtcctcagca	15960
ccagtgccac	tccttacagg	atgagacggg	gtcccaggcc	ttggtgggct	gaggctctga	16020
agctgcagcc	ctgagggcat	tgtcccatct	gggcatccgc	gtccactccc	tctcctgtgg	16080
gcttctgtgt	ccactccccc	tctcctgtgg	gcatttacat	ccactccact	ccctctctcc	16140
tgtgggcatc	cgcgtccact	cccctctct	gtgggcatct	gcgtccacct	cccctctctg	16200
tgggcatttg	cgtccactcc	ctctcctggt	tccttcctgt	cttggccgag	cctcgggggc	16260
aggcagatga	cacagagtct	tgactcgccc	agggtggttc	gcagctgccg	ggtgagggcc	16320
aggccggatt	tcactgggaa	gagggatagt	ttcttgtcaa	aatgttcctc	tttcttgttc	16380
catctgaatg	gatgataaag	caaaaagtaa	aaacttaaaa	tcccagagag	gtttctaccg	16440
tttctcactc	tttcttggcg	actctaggtg	aacagcctcc	agacggtgtg	caccaacatc	16500
tacaagatcc	tcctgctgca	ggcgtacagg	tgagccgcca	ccaaggggtg	caggcccagc	16560
ctccagggac	cctccgcgct	ctgctcacct	ctgacccggg	gcttcacctt	ggaactcctg	16620
ggttttaggg	gcaaggaatg	tcttacgttt	tcagtggtgc	tgctgcctgt	gcacagttct	16680
gttcgcgtgg	ctctgtgcaa	agcacctgtt	ctccatctct	gggtagtggt	aggagccggt	16740
gtggccccag	gtgtccccac	tgtgcctgtg	cactggccgt	gggacgtcat	ggaggccatc	16800
ccagggcagc	aggggcatgg	ggtaaagaga	tgtttatggg	gagtcttagc	agaggaggct	16860
gggaaggtgt	ctgaacagta	gatgggagat	cagatgcccg	gaggatttgg	ggtctcagca	16920
aagagggccg	aggtgggtgc	aggtgagggt	cgctggcccc	acccccggga	aggtgcagca	16980
gagctgtggc	tccccacaca	gcccggccag	cacctgtgct	ctgggcatgg	ctgtgctcct	17040
ggaacgttcc	ctgtcctggc	tggtcagggg	gtgcccctgc	caagaatcga	caactttatc	17100
acagagggaa	gggccaatct	gtggaggcca	cagggccagc	ttctgcctgg	agtcagggca	17160
ggtggtggca	caagcctcgg	ggctgtacca	aagggcagtc	gggcaccaca	ggcccgggcc	17220
tccacctcaa	caggcctccc	gagccactgg	gagctgaatg	ccaggaggcc	gaagccctcg	17280
ccccatgagg	gctgagaagg	agtgtgagca	tttgtgttac	ccagggccga	ggctgcgcga	17340
attaccgtgc	acacttgatg	tgaaatgagg	tcgtcgtcta	tcgtggaaac	ccagcaaggg	17400
ctcacgggag	agttttccat	tacaaggtcg	taccatgaaa	atggtttta	acccgagtgc	17460
ttgcgccttc	atgctctggc	agggagggca	gagccacagc	tgcatgttac	cgcctttgca	17520
ccagctccag	aggcttggga	ccaggctgtc	tcagttccag	ggtgcgtccg	gctcagaccg	17580
ccctcctctc	tgccttctct	ctctgcctca	aatcttccct	cgtttgcatc	tccctgacgc	17640
gtgcctgggc	cctcgtgcaa	gctgcttgac	tcctttccgg	aaacccttgg	ggtgtgctgg	17700
atacaggtgc	cactgaggac	tggaggtgtc	tgacactgtg	gttgacccca	gggtccagct	17760

ggcgtgcttg	gggcctcctt	gggccatgat	gaggtcagag	gagttttccc	aggtgaaaac	17820
tcctgggaaa	ctcccagggc	catgtgacct	gccacctgct	cctcccatat	tcagctcagt	17880
cttgtcctca	tttccccacc	agggtctcta	gctccgagga	gctcccgtag	agggcctggg	17940
ctcagggcag	ggcggctgag	tttccccacc	catgtgggga	cccttgggta	gtcgcttgat	18000
tgggtagccc	tgaggaggcc	gagatgcgat	gggccacggg	ccgtttccaa	acacagagtc	18060
aggcacgtgg	aaggcccagg	aatccccttc	cctcgaggca	ggagtgggag	aacggagagc	18120
tgggccccga	tttcacggca	gccaggctgc	agtgggcgag	gctgtggtgg	tccacgtggc	18180
gctgggggcg	gggtctgatt	caaatccgct	ggggctcggc	cttcctggcc	cgtgctggcc	18240
gcgcctccac	acgggcttgg	ggtggacgcc	ccgacctcta	gcaggtggct	atttctccct	18300
ttggaagaga	gccctcacc	catgctaggt	gtttccctcc	tgggtcagga	gcgtggccgt	18360
gtggcaaccc	cgggacctta	ggcttattta	tttgtttaaa	aacattctgg	gcctggcttc	18420
cgttgttgct	aaatggggaa	aagacatccc	acctcagcag	agttactgag	aggctgaaac	18480
cggggtgctg	gcttgactgg	tgtgatctca	ggtcattcca	gaagtggctc	aggaagtcag	18540
tgagaccagg	tacatggggg	gctcaggcag	tgggtgagat	gaggtacacg	gggggctcag	18600
gcagtgggtg	aggccaggta	catggggggc	tcaggcactg	ggtgagatga	ggtacacggg	18660
gggctcaggc	agagggtcag	accaggtaca	cgggggctct	gatcacacgc	acatatgagc	18720
acatgtgcac	atgtgctgtt	tcatggtagc	caggtctgtg	cacacctgcc	ccaaagtccc	18780
aggaagctga	gaggccaaag	atggaggctg	acagggctgg	cgcggtggct	cacacctgta	18840
gtcccagcac	tttgggaggc	cgaggcgaga	ggatcccttg	agcccaggag	tttaagacca	18900
gcctgagcaa	catagtagaa	ccccatctct	atgaaaaata	aaaacaaaaa	ttagctgaac	18960
atggtggtgt	gcgcctgtag	ttccaatact	tgggaggctg	aagtgggagg	atcacttgag	19020
cccaggaggt	ggaagctgca	gtgagctgag	attgcaccac	tgtactgcag	cctgggtgac	19080
agagtgagag	cccatctcaa	caacaacaaa	gaagactgac	aaatgcagtt	tcttggaaag	19140
aaacatttag	taggaactta	acctacacac	agaagccaag	tcggtgtctc	ggtgtcagtg	19200
agatgagatg	atgggtcctc	acaccatcac	cccagaccca	gggtttatgc	accacagggg	19260
cgggtggctc	agaagggatg	cgcaggacgt	tgatatacga	tgacatcaag	gttgtctgac	19320
gaagggcagg	attcatgata	agtacctgct	ggtacacaag	gaacaatgga	taaactggaa	19380
accttagagg	ccttcccgga	acaggggcta	atcagaagcc	agcatggggg	gctggcatcc	19440
aggatggagc	tgcttcagcc	tccacatgcg	tgttcataca	gatggtgcac	agaaacgcag	19500
tgtacctgtg	cacacacaga	cacgcagcta	ctcgcacaca	caagcacaca	cacagacatg	19560
catgcatgca	tccgtgtgtg	tgcacctgtg	cccatgagga	aacccatgca	tgtgcattca	19620
tgcacgcaca	caggcaccgg	tgggcccatg	cccacaccca	cgagcaccgt	ctgattagga	19680

19740 ggcctttcct ctgacgctgt ccgccatcct ctcaggtttc acgcatgtgt gctgcagctc 19800 ccatttcatc agcaagtttg gaagaacccc acatttttcc tgcgcgtcat ctctgacacg 19860 gcctccctct gctactccat cctgaaagcc aagaacgcag gtatgtgcag gtgcctggcc 19920 tcagtggcag cagtgcctgc ctgctggtgt tagtgtgtca ggagactgag tgaatctggg cttaggaagt tcttacccct tttcgcatca ggaagtggtt taacccaacc actgtcaggc 19980 20040 tcgtctgccc gccctctcgt ggggtgagca gagcacctga tggaagggac aggagctgtc 20100 tgggagctgc catccttccc accttgctct gcctggggaa gcgctggggg gcctggtctc 20160 tcctgtttgc cccatggtgg gatttggggg gcctggcctc tcctgtttgc cctgtggtgg 20220 gattgggctg tctcccgtcc atggcactta gggcccttgt gcaaacccag gccaagggct 20280 taggaggagg ccaggcccag gctaccccac ccctctcagg agcagaggcc gcgtatcacc 20340 acgacagage eccegegecgt cetetgette ecagteaceg teetetgeee etggacaett 20400 tgtccagcat cagggaggtt tctgatccgt ctgaaattca agccatgtcg aacctgcggt 20460 cctgagctta acagcttcta ctttctgttc tttctgtgtt gtggaaattt cacctggaga 20520 agccgaagaa aacatttctg tcgtgactcc tgcggtgctt gggtcgggac agccagagat 20580 ggagccaccc cgcagaccgt cgggtgtggg cagctttccg gtgtctcctg ggaggggagc 20640 tgggctgggc ctgtgactcc tcagcctctg ttttccccca gggatgtcgc tgggggccaa 20700 gggcgccgcc ggccctctgc cctccgaggc cgtgcagtgg ctgtgccacc aagcattcct gctcaagctg actcgacacc gtgtcaccta cgtgccactc ctggggtcac tcaggacagg 20760 20820 caagtgtggg tggaggccag tgcgggcccc acctgcccag gggtcatcct tgaacgccct 20880 gtgtggggcg agcagcctca gatgctgctg aagtgcagac gcccccgggc ctgaccctgg 20940 gggcctggag ccacgctggc agccctatgt gattaaacgc tggtgtcccc aggccacgga 21000 gcctggcagg gtccccaact tcttgaaccc ctgcttccca tctcaggggc gatggctccc 21060 cacgcttggg agccttctga cccctgacct gtgtcctctc acagcctctt ccctggctgc . 21120 tgccctgagc tcctggggtc ctgagcaagt tctctccccg ccccgccgct ccagcgtcac 21180 tgggctgcct gtctgctcgc cccggtggag gggtgtctgt cccttcactg aggttcccac 21240 cagccagggc cacgaggtgc aggccctgcc tgcccggcca cccacacgtc ctaggagggt 21300 tggaggatgc cacctctggc ctcttctgga acggagtctg attttggccc cgcagcccag 21360 acgcagctga gtcggaagct cccggggacg acgctgactg ccctggaggc cgcagccaac 21420 ccggcactgc cctcagactt caagaccatc ctggactgat ggccacccgc ccacagccag 21480 gccgagagca gacaccagca gccctgtcac gccgggctct acgtcccagg gagggagggg 21540 cggcccacac ccaggcccgc accgctggga gtctgaggcc tgagtgagtg tttggccgag 21600 gcctgcatgt ccggctgaag gctgagtgtc cggctgaggc ctgagcgagt gtccagccaa

gggctgagtg tccagcacac ctgccgtctt cacttcccca caggctggcg ctcggctcca 21660 21720 ccccagggcc agcttttcct caccaggagc ccggcttcca ctccccacat aggaatagtc 21780 21840 catccaggtg gagaccctga gaaggaccct gggagctctg ggaatttgga gtgaccaaag 21900 gtgtgccctg tacacaggcg aggaccctgc acctggatgg gggtccctgt gggtcaaatt 21960 ggggggaggt gctgtgggag taaaatactg aatatatgag tttttcagtt ttgaaaaaaa 22020 tctcatgttt gaatcctaat gtgcactgca tagacaccac tgtatgcaat tacagaagcc 22080 tgtgagtgaa cggggtggtg gtcagtgcgg gcccatggcc tggctgtgca tttacggaag 22140 tctatgagtg aatggggttg tggtcagtgc gggcccatgg cctggctggg cctgggaggt 22200 ttctgatgct gtgaggcagg aggggaagga gggtagggga tagacagtgg gagcccccac 22260 cctggaagac ataacagtaa gtccaggccc gaagggcagc agggatgctg ggggcccagc ttgggcggcg gggatgatgg agggcctggc cagggtggca gggatgatgg gggccccagc 22320 22380 tggggtggca ggggtgatgg ggggggctgg tctgggtggc ggggaagatg gggaagcctg 22440 gctgggcccc ctcctccct gcctcccacc tgcagccgtg gatccggatg tgcttccctg gtgcacatcc tctgggccat cagctttcat ggaggtgggg ggcaggggca tgacaccatc 22500 22560 ctgtataaaa tccaggattc ctcctcctga acgccccaac tcaggttgaa agtcacattc 22620 cgcctctggc cattctctta agagtagacc aggattctga tctctgaagg gtgggtaggg 22680 tggggcagtg gagggtgtgg acacaggagg cttcagggtg gggctggtga tgctctctca 22740 tcctcttatc atctcccagt ctcatctctc atcctcttat catctcccag tctcatctgt 22800 cttcctctta tctcccagtc tcatctgtca tcctcttacc atctcccagt ctcatcttt 22860 atcctcttat ctcctagtct catccagact tacctcccag ggcgggtgcc aggctcgcag 22920 tggagctgga catacgtcct tcctcaggca gaaggaactg gaaggattgc agagaacagg 22980 aggggcggct cagagggacg cagtcttggg gtgaagaaac agcccctcct cagaagttgg 23040 cttgggccac acgaaaccga gggccctgcg tgagtggctc cagagccttc cagcaggtcc ctggtggggc cttatggtat ggccgggtcc tactgagtgc accttggaca gggcttctgg 23100 23160 tttgagtgca gcccggacgt gcctggtgtc ggggtggggg cttatggcca ctggatatgg 23220 cgtcatttat tgctgctgct tcagagaatg tctgagtgac cgagcctaat gtgtatggtg ggcccaagtc cacagactgt gtcgtaaatg cactctggtg cctggagccc ccgtatagga 23280 23340 gctgtgagga aggaggggct cttggcagcc ggcctggggg cgcctttgcc ctgcaaactg 23400 gaagggagcg gccccgggcg ccgtgggcgg acgacctcaa gtgagaggtt ggacagaaca gggcggggac ttcccaggag cagaggccgc tgctcaggca cacctgggtt tgaatcacag 23460 23520 accaacaggt caggccattg ttcagctatc catcttctac aaagctccag attcctgttt

Ż,

23580 ctccgggtgt tttttgttga aattttactc aggattactt atattttttg ctaaagtatt 23640 agaccettaa aaaaggtatt tgetttgata tggettaaet caetaageae etaetttatt 23700 tgtctgtttt tatttattat tattattatt attagagatg gtgtctactc tgtcacccag 23760 gttgttagtg cagtggcaca gtcatggctc gctgtagccg caaaccccca ggctcaagtg 23820 atcctccggc ctcagcttcc cagagtgctg ggattacagg tgtgagccac tgcccttgcc 23880 tggcactttt aaaaaccact atgtaaggtc aggtccagtg gcttccacac ctgtcatccc 23940 agtagtttgg gaagccgagg cagaaggatt gtctgaggcc aggagtttga gaccagcatg 24000 ggtaacatag ggagacccca tctctacaaa aaatgcaaaa agttatccgg gcgtggggtc 24060 cagcatctgt agtcccagct gctcgggagg ctgagtggga ggatcgcttg agcccgggag 24120 gtcatggctg cagtgagctg tgattgtacc atcgcactcc agcctgggca acagagtgag 24180 24240 24300 aggtagactg tcaaatctca gagcaaaatg aaaataacaa agttttaaag ggaaagaaaa 24360 accccagctc tttggacttc cttaggcctg aacttcatct caagcagctt ccttccacag acaagcgtgt atggagcgag tgagttcaaa gcagaaaggg aggagaagca ggcaagggtg 24420 24480 gaggctgtgg gtgacaccag ccaggacccc tgaaagggag tggttgtttt cctgcctcag 24540 ccccacgctc ctgccggtcc tgcacctgct gtaaccgtcg atgttggtgc caggtgccca 24600 cctgggaagg atgctgtgca gggggcttgc caaactttgg tgggtttcag aagccccagg 24660 cacttgtggc aggcacaatt acagcccctc cccaaagatg cccacgtcct tctcctggaa 24720 cctgtgaatg tgtcacccgc aaggcagagg ctggtgaagg ctgcaggtgg aatcacggct 24780 gccagtcagc cgatcttaag gtcatcctgg attatctggt gggcctgata tggccacaag 24840 ggtccctaga agtgagagag ggaggcaggg gagagtcaga gaggggacgt gagaaggacc 24900 actggccact gctggctttg agatggagga gggggtcccc agccaaggaa tgggggcagc 24960 cgctccatgc tggaaaagca agcaatcctc cccggtcctg agggcacacg gccctgccca 25020 cgcctcgatt tcaggccagt gggacctgtt tcagctttcc ggcctccaga gctgtaagat 25080 gatgcgtttg tgttcagcca ctaagctgca gtgattcgtc acagcagcaa atggaatagc 25138 agtacaggga aatgaataca gggacagttc tcagagtgac tctcagccca cccctggg